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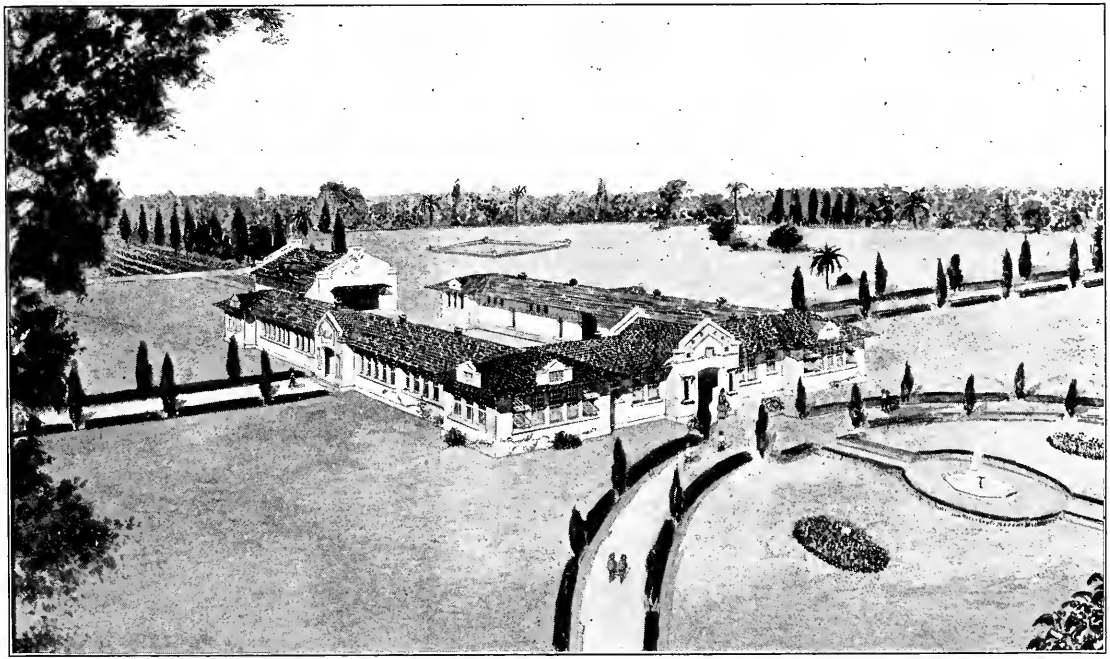

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SCHOOL EFFICIENCY

A MANUAL OF MODERN SCHOOL MANAGEMENT

BY

HENRY EASTMAN BENNETT

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No 1

PREFACE

This work is the outcome of many years of experience in school management and supervision, as well as in the teaching of these subjects in college and normal-school classes. Its aim is first of all to be practical and genuinely helpful to teachers, and in the next place to set higher ideals in this field than are usually associated with the practical attitude. Experience has convinced the author that the gap between theory and practice is more imaginary than necessary, and this work is largely an effort to bridge that chasm. I have tried to reconcile conflicting theories and to outline a concrete plan of procedure in which many of the fine but uncorrelated and fragmentary discussions may be harmonized. It is recognized that many widely known statements, even some included in the "Readings" given in the text, are more or less in conflict with the positions taken here; but they are also in conflict with each other. As the book is for learners rather than for critical argument, attention has not been directed toward these disagreements in particular, but every effort has been made to encourage independence of thought. The point of view is further set forth in the first chapter.

I have had in mind the average school of average opportunities and the teacher of average ability. The temptation to think in terms of ideal schools and experimental schools has been put aside with reluctance. The discussions have been directed away from the peculiar problems of the rural ungraded school, with its one untrained teacher, and from those of the impersonal unit in the huge municipal machine,

though it is hoped there is something of value for both these, and I have thought rather of the community school of medium size, where the larger part of American teaching and learning is done.

My deep obligation is acknowledged to the hundreds of William and Mary men whose responsiveness has been an important guide to the things most worth while in this discussion; to the earnest corps of teachers in the Training School at Williamsburg, who have coöperated by testing out the more radical statements in daily practice; and to my wife and to my colleagues, Professor George O. Ferguson, Jr., now of Colgate University, and Professor John W. Ritchie, for their patient and discriminating criticisms during the preparation of the book. I am also indebted, for extracts and illustrations used, to the kindness of Dr. John Dewey, Dr. Lewis M. Terman, Dr. Clarence A. Perry, the Macmillan Company, Houghton Mifflin Company, Miss Flora J. Cooke, Miss Mary E. Murphy, Superintendent R. E. Hall, Director W. H. Magee, and others.

H. E. B.

WILLIAMSBURG, VIRGINIA

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SCHOOL EFFICIENCY

CHAPTER I

EFFICIENCY IN MANAGEMENT

Scope of school management. The field of this subject lies anywhere between the specific problems of instruction in the narrow sense and the broad questions of administration and supervision. The lines of demarcation will necessarily fluctuate and overlap, rendering any definition of the subject arbitrary and of little use. Any topic may be regarded as legitimately in this field which aims to guide the teacher in securing school conditions, spiritual or material, favorable to educative progress. We may discuss anything from sanitary finger nails to national ideals, provided we are thereby clarifying our conceptions of the school conditions under which real educative results are best attained.

To avoid mere wandering about in so boundless a field it is essential that we be guided by certain principles. The following statements will serve as selective criteria for the discussions which follow.

Economy. *Good management begins with economy.* The management of a school, as of any other enterprise, has for its prime purpose the securing of the largest possible returns for the expenditure involved. Money paid for schools and the yet more valuable time of children are the investments intrusted by the public to the hands of teachers. Results, in the form of practical efficiency, mental power, character, and that intangible product called culture, are the

returns demanded. Inducing the people to increase their investment in schools is an important part of school administration, but the problem of school management is to give them as much as possible for their money, — to use no money for which value is not returned. Educators should realize too that this is the surest way to secure larger investments in the educational plant.

Demonstrable results. The time has come when *results should be of a more demonstrable and largely measurable sort.* Merely spending so many hours a year in "completing" time-hallowed "courses" in traditional "subjects" can no longer be accepted without challenge as adequate proof of efficiency. Nor should a school or system be measured by tests of its own devising. To encourage investment the net profits of an industry should be measurable directly by the investors. Objective measures of efficiency, somewhat scientific, are being developed in the educational world. However, an increasing ability to read appreciatively, to calculate accurately, to converse intelligently, to take an interest in the best things of life and to do well the things that most need doing — such results should be almost as obvious to parents and taxpayers as are dividend checks.

Management as educative as instruction. *The processes of school management are inherently educative in the highest sense.* It has been said that school is not a preparation for life; it *is* life. We may say that school is a preparation for life *because* it is life. Certainly school life is as real to those who are engaged in it as is business or industry or society. It is business and industry and society. The moral and social problems and the problems of practical work are as genuine and the motives as fundamental as any in later life. Class instruction in the formal subjects affords no disciplinary training of more permanent value than the practical and social situations of the child's school life. No

examination takes a pupil's measure so effectively as his daily intercourse with his fellow pupils. No habits derivable from the problems of arithmetic are more useful than those which may be derived from the problems of getting along with one's fellows. A fixed attitude of sympathy, justice, and coöperation toward the individuals and the social units which constitute the school counts more for good citizenship than the profoundest knowledge of history or the rarest appreciation of poetry. Furthermore, the very instruction itself can be motivated and vitalized in no way better than by using the problems of school organization as object lessons or as centers of correlation. *Good management will seize upon every school situation as a significant opportunity for instruction or training.* This by no means implies a "preachy" attitude on the part of the teacher. So genuine are the problems of school life that the teacher needs only to appreciate them fully to avoid any occasion for shamming.

Pupil's interest and school's welfare do not conflict. *The highest interests of the school and of the individual pupil are identical.* Each problem of management is to be considered both in the light of the educative significance for the individual pupil and that of the smooth running of the school machinery. Particularly in matters of discipline these interests seem often to conflict. Granted that, in schools as in nations, the government exists only for the good of the governed, there still remains the difficult choice between the view that "the school is nothing; the child is all" and the opinion that "the interests of any individual must give way before those of the group of which he is a member." We hold that either the sacrifice of the school for the pupil or of the pupil for the school is but a half-solution of any problem of management. It is but a makeshift at best. When the problem

is truly solved, the best interests of both school and child will be found identical.

The form and the spirit. "The letter killeth; the spirit maketh alive." Every great pedagogical idea, once the divine enthusiasm of its discovery cools off, tends to settle down in practice as lifeless formulas, systems, and methods. Ruts and routine are lines of least resistance, and all sorts of school processes tend to fall into them. In their rightful use they are invaluable; elsewhere they are deadening and ruinous. The best policies of school management soon become formalized and spiritless unless some warm-blooded enthusiasm keeps everlastingly vitalizing the forms. Ideals of management should have as a central aim the keeping of teachers' methods plastic and their ideas from petrifying. *The best thing that can be said of a plan of organization is that it forces teachers to deal with ever-varying souls and individual needs rather than with static subjects and systems.* Let us value any scheme of teaching as well for its reflex effect upon the teacher as for its direct effect upon the child and the school.

Generalizations and illustrations. A textbook cannot well be a storybook, and yet *principles are understood, and they are remembered, and they can be applied in just about the degree that they are thought out as specific cases.* An author condenses into his general statements an accumulation of particular instances and experiences. The reader will appreciate these statements in just the measure that he applies them back again to cases. It would be an easy matter to gather countless illustrative stories and pictures to illuminate every chapter of a work on school management. But anyone who has been a teacher or a pupil, or who will intelligently observe either, can gather the requisite illustrations from his own experiences. The effort of gathering these and the thinking involved in making the application

of principles to them is precisely the most profitable exercise involved in the study of the subject. It is the author's part in such a discussion to develop principles; it is the reader's part to illustrate them.

Conservatism, criticism, and radicalism. As to method of study we must steer between two dangers. On the one hand, there is our natural affection for those practices to which we have long been accustomed; on the other, there is the fascination of glowing but untested visions. Long experience makes us conservative. When the ideas about which we have centered our whole system of thinking are attacked, we feel called to a stubborn defense as of our ancient shrines against the inroads of ruthless vandals. But the young are prone to find little charm in the prosy past and see a universal panacea in every plausible plan. The past needs no defense. Its fundamental soundness may be taken for granted. Out of it has come all the good of the present and will come all the better of the future. But the true way to honor the past is to improve upon it. The only way to preserve it is to search out its weaknesses and remedy them. On the other hand, there is no universal solvent for pedagogical difficulties, nor will there ever be. As fast as one small problem of school management is mastered another one will be confronted. Progress must be slow and always difficult. Every slight contribution puts the art on a higher plane and every step forward is infinitely worth while because it brings us — not to the goal, but to the next step.

SUGGESTIONS TO STUDENTS

1. Think of this subject not as something to be prepared for recitation or required for promotion but as practical suggestions for making your teaching more valuable to yourself and to those you are employed to serve. As you read, keep constantly in mind

the question, "What is there in this which I can make use of in my teaching?"

2. *Read always with a problem in mind.* With the aid of the sideheads, challenge the text as to what it has to offer on each point discussed. At the end of each paragraph or chapter raise the question as to what you have got from it worth remembering. Re-read whenever necessary to make the points clear enough for you to sum them up in your own words. Review frequently the ideas that seem to you most worth while.

3. Recall or imagine a special case which illustrates each situation discussed. Think the statements into concrete instances. Preferably keep in mind some particular school — one you have taught or attended, or one you expect to teach. The problems at the end of each chapter are intended to guide you in this independent application. Substitute or add other problems for your own solution. Solve each as genuinely as though you had to meet it in reality. Such thinking requires time and effort, but nothing less can make a good teacher out of a poor one or out of one who is not yet a teacher. The situations discussed are not so rare but that the reader can furnish illustrations as well as the author. Doing so will prove the most useful phase of the reading.

4. Note that the "Problems" are not intended to test the reader's knowledge of the text. The thoughtful reader will constantly organize and review what he has read and what he has thought about his reading if he expects to retain what he has learned. The paragraph heads, summarized in the Table of Contents, will afford the necessary guide for reviewing and testing.

5. The references given as "Readings" have been selected with a view mainly to their ready accessibility. They are mostly either well-known texts or else government publications which may be had free or at a nominal cost. Read as many of these as you can and any of the other parallel discussions to be found in great abundance in educational reference works, periodicals, and books. Compare different statements carefully where they do not seem to be in agreement. Apparently conflicting statements are often due to slightly different use of technical words, or the difference between technical and popular usages of certain terms.

Thoroughness in such questions is usually "many-sidedness." Understanding fully is not a drilling-in of the statement of one authority but seeing the matter in all its aspects.

6. After getting as many opinions of a question as practicable formulate your own conclusion. It is not necessary to accept the author's statements, much less to reject them. The main thing is to test them out with cases until you can accept them or can write out statements which will better stand your tests.

7. Take time to write out in your own words the conclusions of most importance which you reach. Thus you make them clear and lasting. You can scarcely be sure of mastery otherwise. Well-kept notebooks used constantly in reviewing are of inestimable value in making what you have learned permanently useful.

8. Form the habit of weighing the advantages and disadvantages of any actual or proposed plan. Nothing so clarifies thought as to write the "pros and cons" in parallel columns. Do not be content to *feel* that a thing is right or wrong. The feeling is a mere vague idea, an unformulated reason. Respect the feeling — it may be true; but do not desist until you can *state the reason* with precision.

9. So long as there are reasons for and against a given policy — and this is true of all matters worthy of much discussion — it should be neither adopted nor rejected but should be modified. The ideal policy will have all the advantages and avoid the disadvantages. We may never reach the ideal, but our real progress will be always toward it and we may approach infinitely near. Avoid "taking sides" and thus going off at a tangent. Aim for the center of the problem which is always somewhere between the two sides.

10. Do not fall into the easy habit of ascribing the difficulties encountered to the faults of the children, of the parents, of officials, of teachers, or to lack of funds. The schools are retarded not by any one of these but by all of them. They will be improved not by waiting for any one but by improvement of all. Put no faith in a solution which seeks to better one in spite of the others. The true solution involves progress in all of these factors, but the teacher's part *begins* at home. It should not end there, but it must begin there.

11. Study constantly the motives and conduct of children — on the street, at their homes, at school, everywhere. Study children, especially when you are free from the responsibility of directing them. Study them sympathetically, seeking to learn what they do and why they do it, rather than what they ought to do or why. *Learn children in order to teach them.*

12. Do not seek for detailed directions or rule-of-thumb regulations. Strive rather for right attitudes, points of view, and a solid basis of knowledge, concrete experiences, and observations, and organize these into broad principles. Rise above the letter of rules to the spirit of the professional teacher.

CHAPTER II

THE SCHOOL GROUNDS

A glance backward. In ancient Greece the schools where children were taught ordinarily had no grounds of their own, but in every city there was a public *gymnasium*, a sort of "community center" for the sport, recreation, and general improvement of youths and men. Here were large covered and uncovered running tracks, splendid groves inclosed by impressive colonnades, and great porches where philosophers and citizens were accustomed to gather for disputations and a social hour. Wealthy teachers in both Greece and Rome had private gardens where their rich pupils assembled for instruction. In medieval times the monasteries and cloistral schools were inclosed in walled parks or gardens, and this ecclesiastical tradition is carried out in the modern college campus. Schools for children were tolerated in some humble corners of the sacred precincts, and this custom has been perpetuated in the pleasant settings of many European elementary schools.

The typical American public school of democratic ideals and plebeian origin, founded on the rights of all the children rather than preparation for the clergy or charity for the poor, had little thought expended on its environment. In the cities unlovely graveled play areas were sometimes provided where land was not too expensive. In the country some cheap quarter-acre of otherwise useless land was regarded as quite sufficient. Now, with greater wealth and a clearer conception of the future of public education, our cities are buying back land at enormous cost to convert

into parks and playgrounds, primarily for the school children, even though not contiguous to the schools. These grounds are being equipped with elaborate apparatus and supervised by trained instructors, making them an integral and expensive part of the educational plant. The bare jail-yard sort of ground open only at recess time is being displaced by the permanent, well-equipped play park, open to every child and adult who will make proper use of it, daytime and evening, Saturdays, holidays, and vacation times. We are getting back to the Athenian gymnasium ideal but with the child as the center. In the country districts a movement has begun which will ultimately give to every standard school ample space not only for playgrounds, groves, and gardens but also for a permanent teacher's home.

Central location. A first consideration in the selection of a site for the school building is its central location with reference to the population which it is to serve. Due regard must be had to probable areas of development and shifting population, to other present and prospective schools, to accessibility of lines of travel, and, especially in rural sections, to present or prospective routes of pupil transportation.

Sanitary surroundings. More important than any small difference in centrality is a location sufficiently removed from the noise, dust, smoke, and physical dangers of factories, railroads, or busy streets. A stagnant pool, a swamp, a stable or other source of disagreeable odors or breeding place for noxious insects and germs, is a disgraceful environment for an enlightened community to tolerate in the school life of its children.

The teacher's responsibility. But teachers do not ordinarily locate schools, and it must be confessed that a large proportion of American schools are badly situated. Therefore the part of the teacher is to make a virtue of necessity and seize upon the blunders of the past generation to afford

object lessons and training for the next. Some teaching opportunities arising from bad location are as follows:

1. Mapping the district and determining the center of population and the relative desirability of various possible school sites. Such work constitutes an unusually interesting "group-project" for classes in map drawing, geography, and arithmetic. Many schools are located by school boards in ignorance of just such data as a grammar or high-school grade might assemble as a profitable class exercise.

2. Where the location of the school imperils health or safety, the teacher has no choice but to undertake the education of the community as an incident to the education of the children. Public meetings, the press, and the pulpit are reliable allies in arousing public opinion on these questions. Where a state law covers the case, it should be invoked by the teacher, if necessary, against the community for the community's good. Health authorities may be called upon when school authorities are persistently negligent.

3. It may well happen that where protests and injunctions would fail to get a mire drained or a stable yard cleaned up, a vivid study of real mosquitoes and flies, of their metamorphoses and breeding habits, of the germs they carry and the diseases they cause, may result in a campaign that will move the school or rid the place of malaria and typhoid and antagonize no one. A microscopic study of dust-laden atmosphere or of impure water would insure interest in their contents.

4. Where pupils are unduly exposed to danger of accident, a wide-awake teacher would assuredly have some interested railroad man, policeman, or factory superintendent make vivid to the children how accidents occur and how they are to be avoided. In such an environment "safety first" and "first aid to the injured" should take precedence in the curriculum over any "basic subjects."

5. Such instruction must be prolonged into training. Knowledge must crystallize into habits. A dusty or smoky environment obligates the teacher to obtain somehow ample lavatory facilities and to insist upon clean hands until these become habitual; to have each child provided with a desk cloth and to train him in the use of it. The prevalence of flies implies persistent training in trapping, "swatting," screening, and "clean-up" movements.

The space required. The size of the lot should be as great as possible in the city, and at least three or four acres in the country. There should be provision for a dignified, uncrowded approach in the front with liberal grass plots and possibly flower beds. There should be three playgrounds separated unobtrusively by the buildings, paths, and shrubbery; one for the large boys, one for the large girls, and one for the little children. The boys' ground should have room for a baseball diamond, becoming a "gridiron" in season, and for heavy gymnastic apparatus. The girls require space for tennis courts and for free play as well as shady places for walking and sitting. The little ones need room for swings, seesaws, and the like, as well as for running and hiding games. There should be liberal space for school gardens. Where needed, hitching sheds should be provided for those who drive to school. A most attractive and desirable feature is a simple summerhouse which can serve as an open-air schoolroom.

Using disadvantages. Needless to say, it is the rarely fortunate teacher who finds all these conditions in the playground of his school. But it is a basis of our discussion that good teachers are ever on the lookout for "the blessings of adversity" and zealous to convert them into teaching opportunities. Where adequate playgrounds are lacking, an alert teacher will combine with the children to secure some place in the neighborhood for the purpose. Instead

of consuming limitless teaching energy during school hours in repressing an unsatisfied play tendency or punishing children for playing where they should not, the wise teacher will utilize the desire for a playground to motivate the most educative work of getting one. There are probably neighboring lots which can be cleaned up and improved in fair exchange for the privilege of playing upon them. There is fine training in self-control and in the social suppression of lawless ones among the pupils in the simple fact that, by the terms of a bargain with the owner, damage to the adjoining property or any objectionable disturbance arising from the play will automatically cancel the privilege. The school offers no better opportunities for developing social responsibility than a playground which is secured upon the condition of its being properly kept and controlled by the pupils. Here they learn that by natural rather than arbitrary laws privileges are contingent upon their right use.

Where vacant lots are not available, some cities are setting aside certain blocks on the less-used streets as play areas during specified hours. During this time traffic is diverted to other channels. In return for this recognition of their rights the children practice the fundamental lessons of good citizenship by respecting the rights of the public. They learn that it pays them to be courteous to passers-by, considerate of residents, helpful to the authorities, and to be regarded as desirable, coöperating citizens.

Beautifying sensibly. Where adequate land has been provided there is still the problem of making it attractive. The Arbor Day movement attacked this problem years ago. Numerous interesting bulletins with instructions have been issued on this subject. Only a few general suggestions may be attempted here.

1. Do not begin the improvements with criticisms of your predecessors and inauguration of elaborate reforms. Rather

find by careful investigation just what the predecessors tried to do and, if practicable, do it. Build upon the foundations already laid.

2. Make only the sort of improvements that are reasonably sure to be permanently successful and enjoyable. "Fussy" structures which are soon broken down, undertakings half finished and abandoned, trees that do not live and things that children care nothing for, instill most deplorable lessons and counteract the best teaching of civic pride or practical æsthetics.

3. Utility first. Provide liberally for playgrounds, walks, and gardens. Plant primarily for serviceable screens, windbreaks, and shade. Taboo perishing flower beds. Use hardy vines — ivy, honeysuckle, climbing roses, and Virginia creeper — to cover unsightly walls and fences. Sheds and outhouses may be screened by vine-covered lattice work or clumps of evergreen shrubbery, converting the spots offensive to refinement into places of beauty.

4. Better than fences or trimmed hedges are dense masses of shrubbery at the corners and artistically distributed along the borders, low in front and high where screens are wanted and along the background.

5. Provide walks where they will be walked upon. Right angles are seldom either useful or graceful. Whatever may be said of the Boston streets, the best "laying off" is often done by following approximately the paths which the children have made. They are agreeable curves and go just where they are needed. Sturdy clumps of shrubbery at strategic points will prevent the making of too many paths. With the help of the larger boys granolithic walks may be laid at small cost.

6. In planting, avoid straight lines except for marking boundaries. Clusters of shade trees, clumps and masses of shrubbery, and broad, irregular open spaces contribute more to beauty as well as to service.

7. Plant vigorous, native trees, vines, and shrubs which require little or no care. The growing season is during vacation, when most school grounds have no care.

8. Particularly study the possibilities of natural features. A little thought may convert a rock or stump into a thing of great beauty or utility, while a spring or brook is a gold mine of opportunity. Even a mosquito-breeding pool may be made into a marvel of interest and attractiveness. Do not sacrifice a single tree or shrub without long consideration. The school yard should grow, as a house becomes a home, by long planning and affectionate executing, little by little. The life of each child through many school generations may be woven into the making of the yard.

9. Transplanting is a most educative activity for children to participate in, but it is a complex art and cannot successfully be done in ignorance. Much study of native plants, and of the soils, seasons, and conditions favorable for transplanting, should precede any actual digging. It is cheaper to pay for expert supervision than to have plants die.

Cleaning up and keeping up. The abiding problem of the school yard, however, is one of cleanliness and the conservation of improvements already made. This cannot be trusted to janitors. The responsibility rests upon the teachers, but if the children do not have a part, an unexcelled educative opportunity will be missed. School-yard ideals of serviceable beauty and school-formed habits of thrifty neatness ought to be reflected in many homes of the community. The sort of standards that are reflected may be guessed in many American communities where the school premises, from the dilapidated front gate to the unspeakable outhouses, offend every sense of decency.

An enthusiastic "clean-up day" at the start may be desirable if conditions are very bad. Parents may be invited to participate if needed. But a necessity for repeated

"clean-ups" is certainly not creditable. Organization for keeping things up counts for much more. Receptacles should be provided for trash, and this involves the responsibility for unending persistence in seeing that they are used and regularly emptied. They should be inconspicuous but placed where they will be used. Custodians elected at intervals by the pupils, or appointed as reward for merit, should have oversight of the grounds and see that they are always left in as good condition as they are found or better. No child or teacher is too good to help clean up the yard he occupies — certainly not one who is none too good to help litter it up. The school yard is a laboratory for teaching civic tidiness. It is the most obvious advertisement of the kind of influence the teachers are exerting in the lives of children. Each child should likewise come to realize from this laboratory that his home yard is a glaring advertisement to the community of his family's tastes and standards.

Where decency is in danger. Even with the recent effective campaigns against insanitary school privies, disgraceful thousands of them still outrage the refinement and commonest decency of American rural children. The self-respecting teacher will tolerate no laxness in this matter. Sanitary and sightly provision must be made by the authorities. Laws and the regulations of health or educational authorities should be invoked to compel compliance so far as may be necessary. School should open with conditions as nearly like those of a refined home as possible. Quiet, frank talks with the children, boys and girls separately, will probably be necessary if school traditions are bad. Such talks should be constructive rather than critical — of refined conditions and high ideals, of the standards of ladies and gentlemen, of confidence and coöperation. The aid of janitors and older children must be enlisted to secure constant watchfulness against the beginnings of uncleanliness or

impropriety. Whatever the cost, every bad tendency must be detected and crushed at the start. In one school an unspeakably bad tradition of filthy writing and drawing on the basement walls was entirely and permanently eliminated in a few weeks by means of plain talks, followed up with records kept by every teacher of the time each child was out of the room, together with a system of inspections of the premises made almost hourly for the first few days.

It is far from easy to eradicate deep-rooted customs and build standards of refinement for a whole school at once. But it has been done, it can be done, and the teacher worth while will do it, however hard it may be. No true teacher is above doing whatever may be necessary to get right ideals and customs established in his school. Rather, he is above neglecting it. The real test comes in keeping everlastingly at it. Good impulses are quickly aroused in a school, but habits are fixed only by incessant vigilance.

PROBLEMS

Make a study of some school yard, preferably the one with which you are most familiar, as follows:

1. Make a list of the detrimental features of the site.

2. Which of these may be remedied by the teacher and the school? Propose plans for these remedies.

3. Which may be remedied by the School Board? Sketch plans and estimate costs.

4. How may each of these disadvantages be utilized to teach some important lesson effectively?

5. Make a diagram or write a description of the school yard with its environment as it is and another as it should be.

6. Make a list of hardy trees, shrubs, and vines for school-yard use in your neighborhood.

7. Make an abstract of the state and local laws and regulations regarding school sites and premises.

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CULTER and STONE. The Rural School, chap. ii.
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CHAPTER III

BUILDINGS

In retrospect. School architecture is a distinctly modern problem. The Greek cities, we have said, had imposing gymnasia for physical exercise and training. The Spartans had barracks in which the boys lived together after the age of seven, but they had no use for classrooms. There were large buildings devoted to school purposes in Greece, but they were private enterprises and represented no effort to adapt architecture to educational needs. One at Chios, in 500 B.C., fell and killed 119 of the 120 pupils. Pausanias tells us that sixty children were buried in the ruins of a school building which was pulled down, Samson-like, by an athlete who was crazed by defeat. Usually rooms for elementary schools were provided by the teachers in some public or private building, in some unused space on the porches, or in out-of-the-way corners of groves or market places. In Rome the same custom prevailed. Temporary booths (*tabernae*) or lean-to sheds opening on the public street were constructed. Children sat upon the floor, where there was one, or upon the stones of the streets. The more exclusive schools of the later period seem to have been verandas or annexes to the better class of buildings and were provided with benches and often adorned with valuable works of art.

Medieval origins. Modern schools, however, trace their ancestry not to classic but to medieval times. Then all schools were of religious origin and mostly conducted as adjuncts to the monasteries or cathedrals, as we have seen. That traditional school architecture has descended from

ecclesiastical sources is evidenced in the still common vestigial towers, imitative of early churches but useless in school economy; in the arrangement adapted to a speaker and listeners rather than to a company of active and coöperative doers; in the meager windows distributed with reference to external symmetry rather than to lighting or ventilation; and in the forbidding monastic impression everywhere dominant. Some church schools and the conservative universities still deviate little from the original ecclesiastical type.

The Lancastrian schools of a century ago were perhaps the first attempt to construct buildings specially adapted for the needs of elementary schools. These were lofty halls with provision for as many as a thousand children in a single room. They were provided with windows definitely intended for adequate light and ventilation and were equipped with the peculiar furniture and paraphernalia of monitorial instruction.

Modern tendencies. With the growing recognition of the state's permanent responsibility for the education of all the children there has been some progress in the character of school buildings, but only within the past few years has the problem had the best thought of architects and sanitary experts. So new is the spirit and so different are the aims of the modern school from any of its predecessors, so comprehensive are the advances in scientific knowledge of its needs, that nothing which is merely traditional in school structure or arrangement is worth conserving. The whole problem is being taken up *ab initio*, and here, at least, we need have no reverence for the old. Externally, city school buildings have been losing their somberness and taking on suggestions of the office building or even the modern factory. In rural communities the miserable affairs which resembled nothing so much as primitive stables and corncribs are giving way to unattractive imitations of city schools or to quite attractive imitations of country cottages and

bungalows. In progressive small towns the school is rapidly coming to be the typical "show-building" to which strangers are directed with pride. Size, however, is by no means the chief factor in beauty and attractiveness. Modest one-room and two-room buildings in pleasing rural settings may be made very beautiful at a low cost. In fact there is very much to recommend the housing of rather large schools in clusters of one- and two-room units connected by attractive colonnades.

The standard classroom. Aside from fluctuating considerations of taste and the abiding one of economy, the problem of school building is primarily one of assembling standardized rooms. The accepted principles have to do mainly with the classroom units. The ideal for a grade room is very definite. It is usually fixed at about twenty-eight feet wide and thirty-two feet long. The dimensions may be changed a couple of feet either way, if desired, but the proportions should not be different. Such a room will conveniently accommodate forty pupils. Larger classes should never be permitted, and hence no provision should be made for them. Smaller classes are always likely to grow. Besides introducing difficulties of class control by the teacher, a longer room causes difficulties of vision and hearing for the pupils at the rear; and a wider room, for those at the front corners. The height should be not less than eleven feet nor more than thirteen feet. A higher room is harder to heat, ventilate, and decorate effectively and unduly increases the cost of construction.

Corridors. School corridors should be well lighted and abundantly ventilated. They should have radiators or registers adapted for drying or warming the feet of the children but should otherwise be unheated. This will aid in ventilating the rooms and afford a healthful change of temperature without the disadvantages incident to going outside in stormy

weather or cooling the classroom too much. Corridors should never be less than twelve feet in width and for large buildings must be considerably wider. No seats, lockers, cloakrooms, doorways, or stairways should interfere with the free passageway.

Doors. Perfectly plain veneered doors are very attractive and are rapidly gaining in popularity. They are made without panels or any irregularities of surface and hence catch no dust. Transoms are dust-catchers of the worst sort and should be taboo. No part of a building should be dependent on them for light or ventilation nor can teachers be trusted to make right use of them. Classroom doors should open inward. Neither double-swing doors nor any that open into the corridors are satisfactory. A first principle of fire and panic protection is that *all outside doors must open outward* and be so fastened that they can never shut even the smallest child helplessly inside. Outer doors are now commonly equipped with automatic latches so constructed that the slightest push on the inside of the door will open it even when locked against intrusion from outside.

Stairways. There should be at least two stairways, preferably at opposite ends of the building, both for convenience in passing the lines of children up and down and for protection against fire. Ascending drafts in case of fire inevitably follow an open stairway, so that even though it be itself fireproof, a single stairway is likely to be the first part of the building to become impassable. Children of the upper floors can pass up or down two stairways in just half the time they require with one. Even for routine purposes the cost of an extra stairway is more than justified. In emergencies it is invaluable. Where room is scarce the double or intertwining stair doubles the capacity in the same space. Long, straight flights should be avoided. They are seriously fatiguing for pupils ascending and dangerous for the child

who may slip or be pushed over in descending. Flights of less than six steps are objectionable in that they encourage jumping from one landing to the next. Winding stairs are intolerable. All turnings must be made by broad landings. Doors must never open on stairs or landings.

Cloakrooms. For satisfactory cloakrooms the requirements are (1) complete oversight by each teacher of his own pupils, (2) protection against thievery, (3) light, (4) reasonable warmth, (5) very thorough ventilation, and (6) economy in space and construction of the building. Converting the corridor into a cloakroom spoils the one without successfully obtaining the other. A good plan is to have a narrow room at the front of each classroom with two doorways opening into it. In such case it is well to have the foul-air exit in the cloakroom and placed high so that the air passing from the room out through the cloakroom thus affords a constant drying current through the wraps. There should be at least one small window in the cloakroom. An ingenious and satisfactory plan is a long, cupboard-like closet placed in the partition wall next to the flues and occupying only the same depth as the flues. By means of sliding doors the entire area of the closet opens to the classroom, bringing all the coat and hat hooks, umbrella racks, overshoe shelves, etc. within easy reach. When the wraps are in place the sliding doors are closed and blackboards on their surfaces are available. Below the blackboards these doors contain gratings, by means of which the air passes from the room up through the wraps to the outlet into the foul-air duct at the top of the closet. The doors are made to run easily and noiselessly and are managed by monitors. The entire cloakroom is closed except when in full view of the teacher and of the entire room. During school hours the wraps are being thoroughly dried and aired. Cloakrooms of this sort could readily be added to many old buildings.

Toilets. When toilet rooms are located in a basement there is even more urgent need of careful oversight, cleanliness, and thorough ventilation than when at a distance from the building. It is a long step forward to have them distributed on the several floors of the building, with still better equipment and with ideals of cleanliness more nearly like those of the best homes. By arranging in stacks, that is, with those of each floor directly over those of the floor below, the cost of space and of plumbing is not greatly increased. In a few buildings separate toilets have been provided opening off the cloakroom of each classroom, and the most encouraging reports have been given of the effect of this arrangement upon the morale of the school. In any plan the aim is to prevent them from becoming congregating places for the children, to keep them under the easy supervision of the teachers, and to make them such as will maintain the highest standards of refinement for the community.

Are children destructive? Except on the occasions when one may advise with reference to the construction of a new building or secure modifications of an old one, the teacher's opportunity in the matter of buildings is in training the children in the care and protection of them. Among American children generally there has been an appalling lack of respect for paint, plaster, and window glass. Some children seem to lack the capacity to get about in any house without injuring it. Many feel that a school building belongs to no one. They have no interest in its preservation but find a peculiar pleasure in defacing and injuring it as much as they dare. This is not due to any inherent "destructiveness" or willful love of doing wrong but to bad school traditions and to the suggestion given by the dilapidated and ill-kept conditions of the buildings. A broken windowpane is very suggestive. If it does not suggest a new one in its place, it will suggest another broken one by its side. Any ambitious

boy likes the distinction of having made his mark in his little world, and if he cannot get it on the school records in a conspicuous place he will try the school walls. To him there is genuine achievement in leaving an inscription where all comers must see it.

The remedy. The remedy for this state of affairs — and herein is the teacher's responsibility — is twofold: first, that the building, however old and unworthy, be kept clean and free from all those disfigurements which indicate vandalism; and, second, that with all the devices of instruction and training there be developed in the pupils an interest in the building and a pride in its appearance. The child who has actively contributed to the cleaning or calcimining of walls, whether by his labor or his pennies, will vigorously defend them against further defacement. The boy who takes a pride in putting his scrawls or carvings on a public wall will take a far greater pride in putting a coat of paint there. Children do not like to injure walls and desks. They simply like to do *something* to them. Though they do not look very far ahead, they want to see the results of their activities. Almost any boy would rather help put a windowpane in than to break one out.

"Destructiveness" diverted. Let us, then, utilize the children as far as possible in improving the building and keeping it in repair and in an attractive condition. Try to find something for each of them to do, even the smallest — but especially the "mischievous, destructive" ones. Within reasonable limits we can well afford to use regular school time for this purpose. The least appreciation of child nature will indicate that we cannot *send* children to these tasks, we must *lead* them; they are happy to work *with* us when they will not work *for* us. We do not get such things done by *requiring* them but by *allowing* them. A door painted by a boy as punishment will doubtless need

repainting in a very short time. It is his interest even more than his painting that the wall needs. Just how much or what kinds of improvements can thus be made will vary mainly with the teacher's ingenuity and ability. With the right guidance, the children can do or materially aid in almost any sort of cleaning or repair work. At least, they can give or help collect the money to pay a mechanic to do the work under their observation.

Advantages. The advantages of this policy of keeping the building in good condition are obvious: It saves money in the repairs and improvements made. It saves much more by reducing the occasions for having them made. It insures the buildings being kept in better shape. It affords the most practicable instruction possible in the essential manual and domestic arts. It inculcates a higher standard of keeping things in repair, that should be reflected throughout the community in the course of time. It develops a school spirit and pride that will extend most advantageously to other tasks and conduct. Finally, it is the very acme of basic training in civic righteousness.

PROBLEMS

1. Compare some of the newest with some of the oldest school buildings of similar size within your knowledge. What changes are for greater educational utility? Which merely indicate changes in architectural style?

2. Write a detailed criticism of one or more actual schoolrooms. Which defects are practically serious? Which are only theoretically so?

3. Criticize one or more school buildings on the basis of the topics in this chapter. Which defects can be practically remedied? How? Would such changes justify the cost?

4. Study the plans of a number of buildings as given in the readings selected below. Select one you regard as best for a school

the size of yours. Write a summary of its advantages over the one you have. What modifications of the plan would be desirable to adapt it to the site you have?

5. Make a list of the repairs and small improvements needed in an actual building that you are studying. To what extent could the children be used in making these? Make an estimate of the cost with the aid of the children and without it.

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Bulletin No. 48, 1913, "School Hygiene" (Ryan).
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[1] Monroe's Cyclopedia of Education (5 vols., The Macmillan Company) is the most comprehensive reference work on all educational questions. It is new, well organized and illustrated, and accurate. Its various articles might be given as references in every chapter, but to avoid mere repetition it will not again be cited.

[2] The annual volumes of the Proceedings of the National Education Association contain an extensive array of addresses delivered at the general and departmental meetings of that association. They are well indexed and, if accessible, should be consulted freely on any topic in which the student seeks a broad view of current opinions.

[3] The United States Bureau of Education, Washington, publishes a very valuable series of bulletins on a wide range of practical educational problems. These may be secured free or at a nominal cost by addressing the Bureau. The annual reports of the Commissioner of Education contain the only complete statistical data of American education and the most comprehensive review of educational progress in this country and throughout the world. These publications are reliable and should be freely used.

CHAPTER IV

LIGHTING

Eyestrain. Nature has not yet evolved an organ fully adapted for the tremendous strain we put upon the eyes of school children. The fact that over twenty-five per cent of all pupils have seriously defective vision and that this proportion regularly increases during the period of school life indicates how we are overtaxing their eyes. Like other organs, the eye tends to improve with right usage but is easily and permanently injured by overstrain. The permanent loss of visual efficiency — a cruel handicap to inflict upon one at the beginning of life — is not the only penalty for overtaxing the eyes. Unless relieved by the use of glasses, chronic headaches and nervous affections are very likely to follow, making mental concentration impossible and resulting in retardation, discouragement, and early elimination from school.

Its causes. Clear vision requires a focus of the light rays upon the retina at the point of its greatest seeing power, the *fovea centralis*. This necessitates (1) an exactly correct accommodation or change in convexity of the lens varying with the distance of the object; (2) a suitable movement of each eye to bring its fovea and pupil in line with the object; (3) a convergence of the two eyes so that both will have the correct alinement at the same time — this degree of convergence varies as the distance of the object; (4) a circular contraction or expansion of the iris to control the amount of light entering the eyeball — this varies with each change in brightness. Each line of print read involves

three to five jumps forward and one all the way back, and at each jump there must be a new alinement and distance adjustment of each eye and of the two in relation to each other. All these adjustments, to say nothing of the movements of the lids and glands not directly involved in vision, are accomplished by means of marvelously accurate stimulation and response of various sets of minute muscles. Besides this there is an accompanying strain from constant tensions and movements of the muscles of the neck and back necessary to bring the head into a favorable position for seeing, or of the arms to hold the book. With it all, the instant discrimination of the numberless slight variations of minute characters which constitute a page of reading matter is itself a marvel of delicate adjustment to light stimulation. When all this is considered we begin to appreciate something of the enormous demands we are making on the sensory-motor visual mechanism in the course of a day at school.

Aggravations. Under the most favorable conditions possible a curriculum consisting mainly of reading and writing and other fine visual adjustments makes extremely heavy demands upon the seeing mechanism. It is easy to see how the strain is enormously aggravated (1) by a lack of sufficient illumination to enable the words to stand out distinctly from their background; (2) by light so placed that shadows of the hand continuously play over the page on which one is writing; (3) by cross-lights which radiate streaks of varying light and shade; (4) by work placed too near the eye and thus requiring a constant muscular strain of convergence and accommodation; (5) by work placed too far and thus reducing the visual size and clearness; (6) by work placed at a wrong angle to the line of vision and thus producing a foreshortening of the letters and contortion of their shape as actually seen; (7) by print too small for easy discrimination; (8) by highly calendered or shiny paper

which reflects the light in varying streaks of intensity; (9) by any bright area of light entering the eye from the background or anywhere in the field of vision and thus stimulating a contraction of the iris when clear vision of the work demands its expansion. Further aggravation is produced by any disturbance in the poise of the nervous system due to fatigue, irritation, lack of general vigor, strain of the neck muscles in adjusting the head to a good seeing position, physical discomforts from improper seating or the rival stimulation of other sense organs clamoring for the center of attention. The situation is further complicated by the particularly bad lighting conditions under which most children study at night, by the intimate sympathy between the visual organization and the general nervous and bodily tone, and by the fact that a considerable proportion of children begin school with eyes quite imperfect.

Its effects. The defects most common are those due to the shape of the eyeball or lens. They are (1) myopia, or nearsightedness, which is the result of an eyeball so long or lens so convex that the light rays come to a focus before they reach the retina; (2) hypermetropia, or farsightedness, due to an eyeball so short or lens so flat that the rays reach the retina before they focus; and (3) astigmatism, due to any irregularity in the curvature of the cornea causing a distorted image to be thrown upon the retina. Very few eyes are so perfect that careful tests do not disclose some degree of astigmatism. All these defects are often congenital, but they are easily increased by eyestrain, especially in early life. They are all due to lack of proper muscular control or balance and in extreme forms produce squint or cross-eyes. The strain necessary to secure a clear visual image with these defective organs produces headache and nervous disorder. This in turn results in preventing mental concentration and scholastic progress.

The pity of it. Children so afflicted are often regarded as merely stupid, lazy, or stubborn. The world to them is a series of hazy and indefinite color impressions with little distinctness of outline. The printed page is a confusion of marks that fade and flow and dance about as they look at and attempt to distinguish them. The most pathetic aspect is that the afflicted ones have no way of knowing that they see differently from other people. They have no other standards of clearness with which to compare their own. A typical case is that of a manly fellow, from a family where standards of honor and intellectual attainment were high, who brought shame to his parents and was considered a disgrace to his family because he persistently claimed to feel bad or to have headaches at schooltime and study hour but promptly forgot them at other times. Although strong physically and apparently bright mentally, his infallible dislike of school and study resulted in his being badly retarded. He hated school and everything associated with learning and made every excuse to avoid them. Not until he was nearly grown and the hope of an education was past was it discovered that a defect of vision had made it impossible for him to read without painful nervous strain. A pair of glasses was all that he had needed to make him an interested and successful student.

In addition to these defects, children are subject to many sorts of inflammation of the eyes which are germ diseases, mostly highly contagious, and which should be segregated and treated as other forms of infection. These will be discussed later.

Principles of lighting. It is bad enough that the modern school demands five or six hours of reading and writing each day of young children — not to mention the home study under conditions we know not how bad. It is barbarous that we should deny them in school that which is

so essential to them and withal so abundant and cheap, — daylight. The last word as to ideal lighting has not been said, but the principles thus far accepted should be familiar to every teacher.

1. There must be no light shining into the faces of the children or brightly illuminated walls in front of them. Any light within the field of vision stronger than that reflected from the book itself decreases the relative illumination of the book, lessens the power of the eye to read it, and causes continuous strain of adjustment.

2. Light should not come from the right or from behind in such manner as to throw shadows from the hand, head, or shoulders upon the work.

3. Light should not enter through distinctly separated openings, causing cross-lights and areas of decidedly different degrees of illumination.

4. Light should be received through the upper rather than the lower portion of the windows. This better illuminates the side of the room opposite the windows; it enables the light to be reflected down from the ceiling rather than up from the floor; it admits direct light from the sky instead of that reflected from surrounding buildings and other obstructions. A foot at the top of a window ordinarily has practical lighting efficiency equal to three feet at the bottom, especially on the lower floors.

5. The light-admitting area of the windows should be not less than one fifth the area of the floor space. One fourth the floor area should be allowed in gloomy climates, smoky locations, and in places where the light is much obstructed by surrounding objects.

Window requirements. These conditions are all met by having the windows on one side only, — the left; by having them extend from about thirty or forty inches above the floor to as near the ceiling as the structure of the building will

permit; by having them begin some four or six feet from the front end and extend clear to the rear end of the room; and by having the divisions between them made to obstruct as little light as possible, preferably steel mullions beveled inwardly.

Wall coloring. The ceilings down to the picture mold should be white or cream, to reflect the high light evenly down upon the desks. From the mold to the blackboard should be some soft green or tan. The floor, baseboard, and wall to the blackboard should be dull-finished and dark-toned. The desk tops likewise should be finished dull and dark.

Window shades. In any room the lighting area which is necessary on a dark day is altogether too much on a bright day. Excessive light is as harmful as too little. Lighting efficiency is therefore largely a matter of shades and their management. A shade which cuts off the top light only is poor for either lighting or ventilating purposes. Those which roll from the bottom only are inconvenient and readily get out of order. Two shades rolling from the middle in both directions break up the mass of light into two separated blocks. Inside shutters and Venetian blinds are generally regarded as sources of unlimited trouble, though they have certain advantages. Outside blinds control the light only by cutting it off altogether or by cutting it up into a series of alternate bars of light and darkness. They are decidedly undesirable. The best solution seems to be the adjustable shade which is raised or lowered bodily as easily as it is rolled up or unrolled. There are several satisfactory forms of adjustable shade fixtures on the market, and the cost is very slight. Their value depends on the way they are used. They do not adjust themselves automatically to the constantly changing light.

Which direction? North light is best, because it is more even and it requires but little or no shading; but it requires larger window space to provide against dark days, and the

large north exposure makes heating more difficult. South light is hardest to control on bright days; hence south rooms should be used, when practicable, for kindergartens, laboratories, etc., where the sunshine is desirable but less book study is required. West rooms are best for primary grades which are dismissed about noon, and east rooms for those grades which are held to their desks later in the day.

Remedying defective lighting. A room with windows badly arrranged can sometimes be improved with a little ingenuity. A typical frame country school with two widely separated windows on each side was quickly and attractively converted into a well-lighted room by simply moving the two windows from the right side and placing them between the two on the left. New windows may often be inserted between old ones with little expense, and those on the wrong side can be permanently sealed or closed with perfectly opaque blinds. Any that may be in the front of the room must be shuttered so that not a chink of light gets through. Rear windows may well be retained for additional light on dark days. Often a glass door may be substituted for a solid one at little cost and much benefit. Prism glass placed in the upper sash will help to distribute the light. The ribs or prisms run vertically tend to throw the light to the dark ends of the room and run horizontally throw it up against the ceiling or across the room.

Lighting limitations. If satisfactory light cannot be got to the children, by all means get the children to the light. Almost any light may be fairly good if movable seats are provided so that the children may adjust their work to the place and position in which it is best illuminated. The most perfect window-lighting arrangement cannot correctly illuminate all the desks all the time if they are stationary. The most informal moving of chairs and benches to get the children near the windows is better than strained eyes.

Books. Books which are printed on paper with a very high gloss or in which the print used is too fine should not be used for continuous study. Eighteen-point (great primer) type should be used for the primary books and nothing smaller than eleven-point (small pica) or ten-point (long primer) for any books that children are to read.

The teacher's opportunity. The earnest teacher will not be blind to his[1] duty and opportunity in the matter of his pupils' eyes. He will spare no effort or influence within his power to secure the correct construction of the building or any alteration necessary to good lighting. He will see that the shades are so manipulated and the children so seated as to secure the best light conditions for all. The constant movement of sun and clouds makes this a continuous responsibility. The architect can only make good lighting possible. He cannot secure it day by day. Bright sunlight must never shine into a pupil's eyes nor across his desk. Much use of the eyes should never be required where the light is either glaring or insufficient. Defective eyes should be detected by use of the Snellen cards, which may be had from almost any state health or educational department. Parents should be urged to consult a reliable oculist and secure the necessary treatment or glasses to relieve any defects which may be discovered. These afflicted pupils should have special consideration, being placed where the lighting is best (not necessarily strongest), and should be relieved somewhat from the tasks most trying to the eyes and be permitted frequently to rest them completely. Pupils' headaches or a dull

[1] The lack of a pronoun of common gender, singular number, is always awkward in discussions of teachers and pupils. The current tendency to use the feminine in referring to the teacher while retaining the masculine in referring to the pupil seems to be justified on *arithmetical* grounds only. Surely no other apology for the use of the masculine pronoun than the *grammatical* rule is necessary in a work of this sort in which principals and superintendents are referred to as well as elementary teachers.

feeling about the eyes should have careful consideration. Particularly in poorly lighted rooms, schedules of work should be so adjusted as to permit alternation of work which requires much use of the eyes and that which does not. All children should be encouraged to rest their eyes occasionally by closing them or looking at distant objects. They should be taught the hygiene and care of the eyes and warned against reading at home in a lying or other bad posture, in the dusk of the evening, or by any dim or unsteady light. They should be particularly warned against reading with the light in front, a practice which is very common and very harmful.

PROBLEMS

1. Procure a Snellen test card and make a careful test and record of the visual acuity of several persons.

2. Criticize the lighting of several rooms, good and bad, indicating all defects and possible remedies.

3. Where could prism glass or ground glass be used to advantage? What effects would be secured?

4. Where would you seat a nearsighted pupil? Why?

5. Would there be any advantage to a farsighted pupil to be placed as far as possible from the blackboard? What consideration should be given this pupil?

6. Prepare a scheme of colors for ceiling, walls, woodwork, and furniture of selected classrooms. What difference would you make between the coloring of a north and a south room?

READINGS

ALLEN. Civics and Health, chap. vii.
BURGERSTEIN. School Hygiene, chap. ii.
DRESSLAR. School Hygiene, chap. xv.
O'SHEA. Dynamic Factors in Education, chap. xvii.
ROWE. Lighting of Schoolrooms.
SHAW. School Hygiene, chap. ix.
TERMAN. Hygiene of the School Child, chap. xiv.

CHAPTER V

HEAT AND VENTILATION

Master-teachers and fresh air. Socrates taught in the streets, Plato in a grove; Aristotle's school was called the Peripatetic, because he taught walking about among the trees; the Stoics were named for the *stoa*, or porches, where their classes were conducted; the Epicureans met in the gardens of Epicurus, and the Prince of Teachers taught by the seaside and wayside. The world's greatest teachers have ever loved the freedom and the inspiration of the open.

Outdoor classes. School excursions and open-air schools are among the most effective of our present-day teaching agencies. The best device for supplying fresh air to children is just to take them out into it. Why fear irregularity or informality? It is the regularity and formality of our school settings that are deadening to inspiration. It is our shut-in habits that are abnormal and depressing.

Any pleasant neighboring spot, somewhat shielded from distractions and interruptions, shaded from the too bright sunshine or sheltered from the too cold winds, should be a frequent place of resort for the classes of any school. A convenient band-stand, summerhouse, or group of seats in a city park, a waterside pavilion, or a quiet wharf, is worth more than much expensive equipment in getting a fine school spirit and large educative results. At one charming school a simple platform with roof supported on rustic posts of cedar, half hidden in the tall shrubbery and shady trees of the school grounds, constitutes a most useful and inexpensive part of the equipment. Such an open-air schoolroom

could be built by the larger boys at any school. The plainest school-made tables and benches and a strip or two of movable blackboard to hang against the posts when needed are sufficient equipment. Such an outdoor room is not devoted to one grade or to a class of invalids. It is used by any grade when monotony, fatigue, or irritability lower the standard of work and prevent mental concentration in the class. The class may remain but a few minutes for a drill lesson, or it may be for a study-period, or, with "furniture" pushed aside, they may engage in calisthenics, games, or dancing.

Open-air rooms. Open-air rooms for the continuous use of tubercular and anæmic children are now regarded as essential in the construction of large modern schools. The uniformly gratifying results in the way of physical and mental gains on the part of all the afflicted children so provided for have not only made the policy a permanent one throughout the civilized world but have raised a serious discussion of the question of similar provision for normal children.

Window ventilation. Next best to getting the children out to the air is getting the air in to the children. It is too commonly supposed that because there are openings where the air might come into the room the air is struggling to get in. Having openings is one thing; getting the air through them is another. When the rooms are not heated or artificially ventilated, exhaled air is warmer than the fresh and will therefore tend to rise. Openings at the top of the room for its egress are, then, as important as those lower down for the ingress of fresh air. Ideal windows would be flush with the ceiling and open their whole length, offering not the slightest resistance to the flushing out of all air. Even openings at different levels give little assurance of sufficient circulation to meet the needs of a

OPEN-WINDOW ROOMS

Above, midwinter in an open-window room, Graham School, Chicago. Below, a classroom converted into an open-window room by means of draft screens, Moseley School, Chicago

room full of children if no fan or breeze is driving. Openings on opposite sides of the room are more effective, especially doors opening upon corridors through which the air sweeps freely.

Window boards. Window boards are a very simple and effective device for permitting free circulation through the windows and yet preventing cold drafts from striking directly upon the children. A board, six to ten inches wide, is placed at the bottom just inside the inner stop. The window may then be raised nearly to the top of the board: the current entering the room will be deflected upward by the board and also between the upper and lower sashes. A flower box in the window serves a similar function besides its other values. Glass window boards have the advantage of cutting off no light. In the open-window room of the Moseley School, Chicago, draft screens resembling inverted awnings of durable white goods are used in place of window boards. These are made to be removed or raised and lowered easily and are used with windows wide open.

Flushing and drafts. Whatever the system of ventilation or of heating and whatever the weather, occasionally during the school day and always when the room is being cleaned, the windows, especially at the top, and the doors should be thrown wide open and the room freely and thoroughly flushed out. Colds are not contracted from winds. A continuous draft on a small portion of the person may disturb the heat-regulating mechanism of the body and produce local congestion with serious results. The remedy is not to lessen the air movement about the person but to increase it. As Terman forcibly puts the case: "Instead of fleeing from drafts we should seek them. As long as we are healthy, it is only the little draft, which cools but a small part of the body, that is injurious. The remedy for draft, therefore, is more draft, coupled with the healthy

circulation that comes from sufficient exercise" ("Hygiene of the School Child," p. 161).

Fresh air. Motionless, moistureless, lifeless indoor air rests like a curse on the average school. We attain it at enormous costs for air-tight buildings and elaborate thermostatic systems of suppressing vitality.

Fresh air is the best-known preventive of anæmia, colds, tuberculosis, and other ills and contagions that school children are prone to contract.

Fresh air is the most effective preventive of disorder, irritability, and friction in the management of a school.

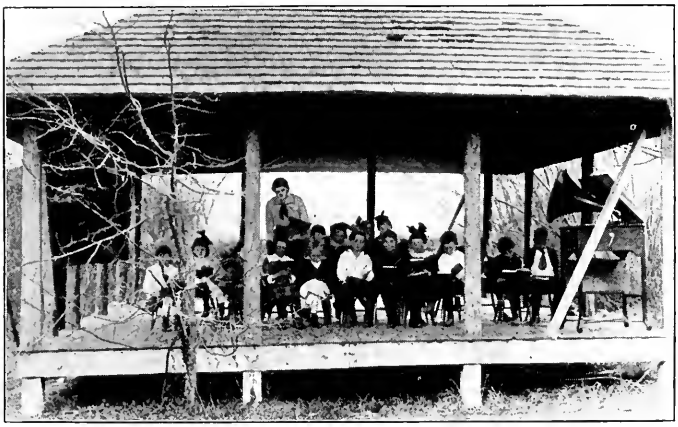
Fresh air dissipates fatigue, inattention, and nervousness.

Fresh air is a large factor in cheerfulness, enthusiasm, good spirits, and school pride.

Fresh air is indispensable to efficient and sustained mental activity.

Fresh air is the cheapest, most abundant, most accessible, and most delightful commodity with which school authorities are concerned — and the most carefully excluded.

What is fresh air? By *fresh air* we mean that which is as nearly as possible like that outdoors on a fine, bracing, invigorating day. It is this for which the human machine has become adapted in the course of its evolution and in which it functions to best advantage. Devisers of school-ventilating systems have been assuming that essentials of good air are a high and uniform temperature and freedom from all appreciable currents, together with a low percentage of carbon dioxide and impurities. Recent investigations have shown, on the contrary, that schoolroom conditions cannot produce sufficient carbon dioxide or other substances to be dangerous or to interfere materially with working efficiency, that high and uniform temperatures are undesirable, and that considerable motion in the atmosphere is particularly necessary. The ventilation problem is not one of



TYPES OF SCHOOL WORK OUTSIDE OF SCHOOL WALLS

A school-directed home garden (see p. 315) and a simply constructed outdoor classroom (see p. 37)

simply getting certain chemical or organic substances out of the air, although some of these in undue quantities may be deleterious, but is primarily one of getting physical conditions of the atmosphere adapted to the best functioning of the human organism.

It might well be a school-management proverb that "the lack of fresh air is the root of all evil." For the want of fresh air countless children are suffering all manner of temporary and permanent ills and otherwise good teachers are being recorded as failures. Out of doors, in Nature's laboratory, where the green things are growing, an endless supply is being constantly purified, humidified, and put into proper circulation. It surrounds and bombards the schools. It is only necessary not to shut it out.

Oxygen and energy. The power by which all study must be accomplished is child energy. Oxygen only can convert nutriment into energy. Vigorous brain action is dependent on an abundant supply of food and its ready oxidation. But this oxidation requires something quite different from mere inhalation and exhalation of air. It is equally necessary that the digestive processes make the nutritive materials ready for oxidation, that the circulatory system transport the munitions to every portion of the body, that the excretory agencies actively remove toxic and deleterious substances, that the neural and muscular cells which are to be energized shall be vigorously functioning and, specifically, that the vasomotor and coördinated reflexes which automatically control the thermic states of the body shall have the sort of stimulation which is favorable for mental work.

All this is necessary to convert oxygen into thought activity. To secure the combination, we need something more than mere "pure" air. There must be air in motion over the body and more vigorously through the lungs than is possible to one sitting stooped over a book. There must

be frequent energetic and varied activity of the voluntary muscles. There must be vigorous functioning of the vital processes. There must be more or less stimulation of the complex temperature adjustments of the body by changes of surface temperature.

Before we go into a discussion of the methods of ventilation, it will be well to get before us the requisites in the related problems of schoolroom heat and humidity.

The real temperature problem. Uniformity of body temperature is undoubtedly a prime essential to health. The clinical thermometer is the physician's first test for abnormal conditions, and a slight variation from the normal is occasion for anxiety. But the thermometer under the tongue registers nearly the same for a healthy person whether one has been playing ball in July or riding through a snowstorm in January. The temperature that counts for physical welfare is regulated inside the body and is equally independent of weather variations and steam-heating plants. The heating problem, therefore, is not one of keeping the room at a constant temperature but of keeping the body's automatic thermic adjustments functioning. This is accomplished chiefly by the vasomotor reactions which direct the blood flow to the surface when the inner combustion is too great or surface radiation too slow, or which send the blood inward when heat production runs low or radiation high. The perfect functioning of these adjustments and the atmospheric environment of a bracing day are the temperature conditions most favorable to profitable brain activity.

The best school temperature for health and convenience is from 65° to 68° Fahrenheit. The story of the open-air schools, however, in which the frailest anæmic and tubercular children have grown well and strong under the rigors of northern winters without any artificial heat, has proved beyond question that if suitable clothing and nourishment are

provided, the matter of heat is of small consequence. A freezing temperature is entirely favorable to school work if adequate wraps are provided.

Humidity. At a temperature of 68° air requires six times as much moisture as it does at 20° to maintain the same humidity. Thus when the cold air of outdoors is heated on entering the schoolroom it becomes relatively very dry. The atmosphere of Sahara is not nearly as dry as any air that has been heated thirty degrees without being moistened. We place wet garments by a stove to dry just because the heated air is so extremely active in reëstablishing its humidity. In a schoolroom where humidifying has not been provided for, the only accessible moist surfaces at which the recently dried air can saturate its thirst are the mucous membranes of the pupils' air passages, their eyes and delicate skins. Depriving these tissues of their normal dampness not only causes much discomfort but interferes with their functioning and renders them subject to serious disorders.

While dry air is most to be guarded against, a high humidity with a high temperature prevents sweat evaporation, increases the temperature and circulation at the surface of the body, and thus interrupts the circulation of blood in the brain and vital organs, making the atmosphere feel oppressive and rendering mental work difficult. On the other hand, a high humidity with a low temperature produces a "clammy" atmosphere with its discomforts and dangers. It is important therefore that both high and low extremes of humidity be avoided.

What is the ventilation problem? With these facts before us it is obvious that we must revise many popular ideas of artificial heating and ventilation. Under the sedentary conditions of school work, as ordinarily organized, less than one seventh of the air of the lungs is changed at any breath. Bad posture probably reduces even this very materially. The

still, confined atmosphere of a classroom permits a jacket of inert air to cling like a cloak about the person, thus depriving the skin of that atmospheric stimulation of the vasomotor adjustments referred to above. The same conditions which thus reduce the supply of air accessible to the lungs likewise reduce the action of the vital organs and muscular system by which the oxygen becomes available for nourishment and energy. No mere mechanical system can produce conditions as favorable to health and vigor as simply keeping in close touch with the outdoors. But if a reasonable humidity is maintained, overheating avoided, physical exercise frequent and varied, posture good, deep breathing habitual, and the room frequently flushed out with fresh air from outdoors, almost any system that keeps the air moving and affords a temperature convenient for school work will be satisfactory. We may give attention here to a few of the simplest effective plans of heating and ventilation.

Direct radiation. Direct radiation from a stove or open fire is healthful but very extravagant, because an astonishingly small percentage of the actual heat generated radiates into the room and that little is unevenly distributed.

Gravity systems and the jacketed stove. The simplest and most economical plan of school heating and ventilation is the "gravity system." This name is applied to any arrangement which secures circulation by utilizing the difference in weight between cold and warm air to move the currents and which supplies heat by warming the air as it enters. The jacketed stove is the most effective and economical gravity system for a single room. This consists of an ordinary heater, preferably of the tall, round type, inclosed in a cylindrical sheet-metal jacket about five feet high. The jacket stands off about two inches from the stove and is fastened tight to the floor. It is placed on a zinc mat or stove board, to facilitate cleaning and to protect the floor from

falling coals. It is entirely open at the top and has a hinged door through which the stove is managed. Under the floor is a fresh-air duct leading from one side of the building and opening under the stove. It may be built of metal or boards but should have a smooth interior, offering no obstruction to the free flow of air or harbor for dirt or insects, and it should be screened to exclude birds, trash, etc. It should be placed so as to receive the air at some point free from dust or odors and if placed on the south side of the building, the air will enter several degrees warmer in severe weather and thus effect a very important saving of fuel.

As soon as the stove is heated the fresh air is warmed, rushes upward through the jacket, and rises to the top of the room. Here it spreads itself out and presses downward the air already in the room. Since only a certain amount of air can get into the room at a time, it is necessary to draw out the old in order that the new may come in. The forced exit of the impure air is accomplished by using the otherwise wasted heat which goes up the chimney. The stovepipe enters the flue seven to ten feet from the floor and extends at least two or three feet up through it. The hot pipe and smoke create a draft up through the flue, while an opening at the floor permits the air to enter from the room. Experiment has shown that the best circulation is attained by having this opening for the foul air outlet at the level of the floor and near the stove, which happens to be the most convenient place possible for it. As soon as the fire is lighted it begins automatically to force one current of air up through the jacket to the ceiling and draw another out through the flue from the floor, thus making a complete circulation.

The stove should by all means be a large one. The net opening for either inlet or outlet should be not less than two square feet. The inside diameter of the flue should be

at least three inches greater than that of the stovepipe which extends into it. On cold mornings it is well to cut off the fresh-air supply under the stove and open the jacket door for a half hour or more, while the air already in the room is being thoroughly warmed and the children are drying and warming their feet at the stove. Supplementary doors are sometimes provided in the jacket for additional foot-drying accommodations. Various adaptations make the plan available for any room or any flue. The jacket, duct, and flue may be made by local mechanics at the cost of a few dollars, or a complete outfit ready to install may be purchased from supply houses.

Hot-air furnace. For two rooms or more, the same heating and ventilating effects as from the jacketed stove are attained with great saving of the space, fuel, dirt, and confusion incident to separate stoves by means of a furnace placed in the basement. In principle the furnace is merely a large stove with jacket closed at the top and forcing the fresh, warmed air through large ducts to the classrooms. The intake in the room should be six to eight feet from the floor on the side opposite the windows, or next the flues, and the foul-air outlet should be near the floor on the same side. The latter naturally opens into the stack through which the smoke pipe from the furnace passes.

Too much emphasis cannot be put on having the furnace sufficiently large. Skimping here is very common and is the worst extravagance. A small furnace requires frequent feeding, necessitating almost constant janitor service and producing rapid fluctuations of temperature, with far greater consumption of fuel, destruction of the furnace, and danger to the children from coal gas, which will soon leak into the air supply under such management. Furthermore, small ducts or gratings largely filled up with scrollwork

make necessary an impossibly rapid current through the passages in order to secure any considerable movement in the classroom.

Ventilation standards. Expert authorities and state laws usually place the minimum of fresh air which should be supplied for each child which a schoolroom is to accommodate at thirty cubic feet per minute. This means seventy-two thousand cubic feet per hour for an average classroom. If the net opening in the fresh-air passage is but a square foot, a gale of nearly fourteen miles per hour must pass this point to secure the necessary circulation. Treble the opening and the same result is secured with a moderate current.

Precautions. Any gravity system needs careful oversight to guard against interruption by winds and weather. The fresh-air intake, like a chimney, may have to be shielded at times to prevent strong winds checking or even reversing the flow of the current. When a cold wind is blowing on the windows of the rooms on the north side and the sun shining brightly on the sheltered windows of the south side, both temperature and circulation are much higher in the south rooms. It is often necessary almost or quite to cut off the current to the south rooms in order to get any warm air from the furnace to enter the colder side of the house. Sometimes this is neglected, and the oversupply of warm air in the south room tempts the teacher to open the windows, whereupon the suction of the southbound winds draws a gale from the furnace directly out the windows and the north rooms are left to freeze. It is usually necessary that the warm-air supply be cut off from a room when the windows are opened.

Forced circulation. To obviate the uncertainties of gravity currents, fans are installed in most buildings of more than four rooms. A large fan is usually placed in the basement and drives the fresh air over the furnace (plenum

fan) or it may be placed in the foul-air exit near the roof (exhaust fan). In large buildings both may be used but, of the two, the plenum is the more effective. The arrangement of fresh-air and foul-air ducts is not different from that for the gravity circulation. A liberal supply of electric fans in the rooms, to keep the air agitated, would undoubtedly greatly increase the value of any ventilating system.

Larger systems. In very large buildings and where weather conditions are especially severe, it is necessary to supplement any warm-air plan of heating by means of some steam or hot-water radiation system. These, of course, do not ventilate. The choice as well as the installation of any such system on a large scale is a matter for experts. All heating systems are more or less variable and complex. Untold annoyance and unlimited waste in fuel and in the equipment itself are common through lack of intelligent management. Here we can only insist that unless a thoroughly expert janitor is employed the principal should make a careful study of the most economical and efficient operation of the plant and give it sufficient personal supervision to see that satisfactory results are attained. Inexpert janitors need supervision and training as truly as inexpert teachers and the children themselves. Time consumed in mastering the idiosyncrasies of a heating plant to which one is held in servitude is time wisely invested.

Foot-drying. In any school-heating system there should be provision for warming and drying the feet of the children, preferably by special registers placed in the floor of the corridor. Pupils should not be restricted in the free use of these. Warm feet are necessary to good circulation and are far more effective than high temperatures in the schoolroom for getting the children warm and for avoiding colds.

Humidifying. To restore humidity, it is only necessary to introduce sufficient moisture into the warm-air supply duct, so that the air will take up all that its increased heat demands. This is ordinarily provided for by an open vessel of water on the top of the jacketed stove or a flat pan provided in practically all furnaces, over which the current of hot air passes. If this is insufficient, and it will be if the furnace is too small and the currents are forced through it rapidly, it is easily supplemented by thick cloths hanging over wire supports placed above the pan. The cloths act like wicks, drawing up the water as used and affording a larger evaporating surface. Neglect is the worst foe to humidifying arrangements. Water pans are often allowed to remain dry and even to rust out without replacement. Attention to them is a duty of the janitor which the principal, having in mind the dangers of dried-out air, should be untiring in following up.

Testing the air. The sling psychrometer, recommended and fully described by the United States Weather Bureau,[1] may be used to determine the humidity with accuracy. It is cheap and its use constitutes an admirable scientific exercise. But for practical purposes during school hours the best method of making sure of adequate humidity is to look after the water pan and to keep in close touch with the well-humidified air out of doors.

Several methods have been devised for testing the impurity of the air in a room. The Fitz, the Wolpert, and the Cohen and Appleyard tests measure the impurity of the air in terms of the amount of carbon dioxide which it contains. The koniscope and the sugar tests determine the impurity by the amount of dust and the number of bacteria in a given volume of the atmosphere.[2]

[1] *Bulletin No. 235*, Department of Agriculture.

[2] See Dresslar, School Hygiene, p. 170, and *National Education Association Proceedings*, 1911, p. 977.

These tests have their value for research and scientific experiment. For practical use in the busy classroom, nature's tests, the sense of smell and the feel of closeness, are far more effective. Owing to the readiness with which these senses are fatigued or become "adapted" one does not readily detect the gradual changes of the atmosphere in which he is confined. Principals, supervisors, janitors, and particularly the pupils themselves should cultivate a sensitivity to unwholesome conditions, and as they pass in and out of the rooms serve as official indicators of the need of ventilation. It would raise any community's standard of health and refinement if all children were made "fresh-air cranks." We very readily become habituated to either fresh-air or foul-air conditions.

In concluding this rather long chapter we may summarize some of the more practical points for the guidance of teachers.

Summary of practical rules. 1. Study carefully the heating and ventilating system you have in order to secure whatever efficiency it is capable of affording.

2. Unremitting vigilance in the management of the furnace, stoves, and flues is necessary to satisfactory results.

3. Instead of giving thought to tests for dangerous atmospheric conditions, keep so far on the safe side that problems as to the purity of the air will never arise. Air and water are cheap.

4. Air will humidify itself if abundant water is supplied as it is heated. Outdoor air is always safe and accessible.

5. Occasionally throw open doors and windows and flush out the room while children are in motion or out at play.

6. Always have the room flushed out during and after sweeping or dusting.

7. Low temperatures with sufficient wraps are safer than high temperatures.

8. Do not let children sit with damp or cold feet or where a current of air strikes upon a portion of the body. These practices are dangerous.

9. Posture, breathing, and exercise have incomparably more to do with ventilating values for the child than all the windows or ventilating systems; therefore:

(*a*) Train the children to sit erect and afford them every aid and opportunity to do so easily and comfortably.

(*b*) Have frequent breathing exercises and cultivate habits of deep breathing among the children.

(*c*) Have frequent periods of active physical exercise, such as manual work, calisthenics, singing, marching, games, or outdoor play.

10. Whenever the class (or teacher) becomes dull, depressed, or irritable, it is likely that fresh air and vigorous movement are needed. Open the windows, exercise, or get outdoors if practicable.

11. Arrange to take the class out into the open for work as much as possible. Get them accustomed to it, so that the excitement of the occasion will not consume their attention.

12. So long as the air and the children are freely and abundantly in motion and outdoor air has free access to the children there need be no occasion for anxiety as to ventilation.

13. Constant instruction and daily training should be directed as forcibly as possible toward establishing those habits of ventilation and exercise which make for a vigorous and energetic race.

PROBLEMS

1. Make an abstract of your state laws or official regulations with respect to the problems of this chapter.

2. Write a criticism of your school building as to its heating and ventilation system.

3. Determine the net area of opening, at its smallest point, of the fresh-air duct leading to the furnace (or stove). At what rate must the current of air pass this point to supply thirty cubic feet per minute for each child in school?

4. Make a similar test of the fresh-air duct leading to your classroom.

5. If an anemometer is available, measure the actual rate of these currents.

6. Work out a diagram showing the actual course of the currents of air in your schoolroom on a cold day with the ventilating system in use. (Smoking blotting paper or punk will indicate the movements of the air.)

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TERMAN. Hygiene of the School Child, chap. x.

CHAPTER VI

SEATS AND DESKS

Seats of the past. In classic times the youth had only his knees on which to rest his scroll or waxen tablets. For a seat he may have had a plain bench, but more commonly he had the floor, pavement, or grass. However, the lack was not serious, for reading and writing played a small part in his education. In medieval days the monasteries were equipped with benches capable of more or less physical torture, but those who sought physical development and believed in bodily vigor spurned literary studies altogether. Medieval writing desks were, of course, of no standard shape or style, but for those who wrote much they were usually pulpit-like affairs with tops sloping from thirty to forty-five degrees and commonly made for writing while standing. In pioneer American days the split log, with pegs driven into auger holes for legs, was not an uncommon type of bench, while a slab supported against the wall of the room served for a desk. This was succeeded by the clumsy and comfortless homemade board desk of various designs. As commerce entered the field of school-desk making, the ideal has seemed to be rigidity. Much has been done in working out a strong and attractive steel construction with a high finish and tasteful lines. As wood gave way before cast iron, so the latter is surrendering the field to steel or semi-steel.

"The bugbear of school hygiene." The making of desks of sanitary, durable, and attractive construction has kept pace with other school progress. But in the matter of meeting the hygienic needs of the pupil who is occupying

the seat, recent authorities have expressed the general sentiment thus:

The bugbear of school hygiene for a long time has been the school desk. — Burgerstein, "School Hygiene"

On the hygienic requirements of school desks . . . fundamental requirements have scarcely been touched. It seems an indisputable fact that the most serious defect of the average school-desk is that it subjects the pupil to a posture that fosters spinal curvature, cramped chest and defective vision. . . . Unless desk tops are set at proper angle, children will not and cannot sit erect to do their work. They will bend over their work day after day unless we devise a practicable desk top that will necessitate erect normal posture for all their work. — Dresslar, "School Hygiene"

School desks as at present made are undoubtedly demanding abnormal positions and making them habitual. — Cyclopedia of Education

Essentials of a good desk. The features to be sought in an ideal desk include the following:

Construction should be strong, durable, and free from corners or irregularities which will catch dust. As already indicated, admirable progress has been made in these respects.

Finish should be sanitary, hygienic, and in good taste. The best desks of to-day have a fine dead-black enamel finish on the metal and a dull, soft-toned finish on the wood. The use of light-colored woods finished in bright tones and glossy surface is not in good taste or in harmony with the studious purposes of the schoolroom unless perhaps in primary grades. Such finish reflects the light in a manner trying to the eyes and lessens the efficient illumination of a book resting upon it.

Desks should be single and separate. Double desks are now tolerated only in cheaply equipped schools. The desk which is attached to the seat in front is hardly less objectionable than that intended for two children. In each case

many annoyances arise, concentration is interfered with, and there are obvious sanitary disadvantages.

The seat should be narrower than the desk. This makes for better posture and allows more room for the child to rise and for exercises without unnecessarily wide aisles. Seats should be of the chair or saddle type. The pronounced double curve with a ridge near the front produces pressure on the nerves and blood vessels just above the knee or else tends to slide the buttocks forward, and often does both. It also twists the spine severely if the child is seated sidewise for writing, thus tending to develop spinal curvature.

Backs should be adjustable as to height and as to slant. They should not be as high as the shoulder blades nor touch the hips. They should support only the small of the back. They should be practically solid, with no uneven ridges or separate slats pressing upon the back. They should have a vertically convex curve with possibly a slight horizontal concavity. A slight resilience to the back will afford great relief to tired pupils and conserve for school work much energy ordinarily expended in resisting spinal jars. The common type of back is rigid, curves away from the small of the back, supports the shoulder blades, and coöperates with the seat in pushing the hips forward.

The desk top should be adjustable for different kinds of work. For modeling and most sorts of handwork a perfectly level top is desirable. For writing there may well be a slant of less than ten degrees and a "minus distance," or projection over the seat, of about two inches. For reading, the book should be some six inches higher than the writing level and slightly forward of the edge of the seat, and the desk top should have a slant of about forty-five degrees. The size and shape of the child, the size of the book and the print, the condition of the eyes, and the light conditions make the ideal position somewhat variable. Numerous

designs for adjustable desk tops have appeared in this country and Europe during the last half century. Few of them have been able to hold a place on the market. Most of them were too complicated and cumbrous to be practicable. All have failed chiefly in that they did not support the book in the position where it should be for reading. Merely to tilt the top accomplishes little or nothing. It must be tilted, thrust forward, and raised and should hold the book in place. To be practicable, all this must be done in a single, easy, and silent movement, the parts being so constructed that they will not readily break, wear out, or get out of order.

The book box should be dust-proof and might well be thief-proof. The ordinary bookshelf under the desk top is in the way of the knees, cannot be readily seen or kept in order, is inconvenient and insanitary, and encourages interference by other pupils with the owner's possessions. The hinged top has some advantages, but it cannot be opened without moving everything from the top, the lid may be used as a screen for mischief, and the box is still in the way of the knees. The book drawer under the seat, common to movable chair-desks, is a great improvement in all these respects. This closes tight and may be made to lock. When it is open it is in full view of the child as he sits at his desk and when closed is entirely out of the way. Whatever the style of the book box, an unending duty of the teacher is to see that it is properly kept. Each book, tablet, and pencil should have its place and be kept only there while habits of neatness are being established. It is disgraceful to find books destructively jammed inside of each other or with a month's accumulation of trash behind them.

Inkwells should be nonbreakable, noncorrosive, easy to fill and to clean, and such that they cannot get out of order. Many kinds advertising these virtues are on the market. The better ones are satisfactory if they are cared for, but

A PATENTED MOVABLE DESK

The back is hygienic, and the top is easily adjusted to any position or removed to form an auditorium chair

none can keep itself in order. Vigilance and supervision are the price of satisfaction here as elsewhere. With the increasing use of fountain pens it is desirable that a well be used which does not leave an unsightly hole in the top of the desk if permanently removed. Unused wells — ink and otherwise — are ever causing trouble.

Movable desks are now largely used for primary and special classes. These are movable chairs each having its own desk-top or writing surface suspended by some more or less successful device. They are gradually replacing fixed desks in many schools and will doubtless be in general use ultimately for all grades. The projecting tops tend to render some of them quite unstable. Those which fall over easily are a source of annoyance and even of danger in case of panic. The whole idea of children's seats being screwed immovably to the floor in rigid lines is repugnant to the modern spirit of school study and government. Group seating should be possible to make group teaching fully successful. Movable seats may be arranged in two or more distinct groups, separated as far as desired; they may be massed in different parts of the room, gathered about the front for demonstrations, faced in different directions, arranged in a circle or amphitheatrical form, or pushed to the walls, leaving the room free for games, folk-dancing, and the like. For primary grades they are becoming almost indispensable. They make the classroom available for community center work of various kinds, and by this increased usefulness of the school building will doubtless prove an actual economy.

For practical economy, a movable desk which may be readily converted from a good school desk into an equally good auditorium seat has decided advantages. It makes it possible to convert any classroom into a social gathering room or a lecture room for adult evening classes. With such seats an auditorium may readily be used for either

class or gymnasium purposes, or two classrooms may be thrown together into a very good auditorium, since both the facing and the spacing of the seats is easily changed.

Height adjustment of both seat and desk to the needs of the individual child is available in many of the better-grade desks and is in general demand. All seem to have the inevitable objection that the adjustments will become loose and squeaky in the course of time and that teachers do neglect the adjusting unless constantly supervised. If the desks are readily movable from room to room and an abundant assortment of sizes is provided, very few adjustable-height desks, if any, need be provided. Otherwise at least one fourth of the desks in a room should by all means be adjustable in order to avoid serious physical strain upon the children who do not fit the desks. The height of the seat, according to Dresslar, should ordinarily be two sevenths of the height of the child; the height of the desk top (front edge at writing slant) should be three sevenths, plus an inch in the upper grades or plus half an inch in primary grades. Owing to decided differences in the shape of growing children, this should undoubtedly be corrected for each child separately. A long-legged growing boy and a roly-poly girl are proportioned on quite different plans.

The hygiene of sitting. A healthful sitting position demands that both hips and shoulders should be pushed back and the small of the back pushed forward. This posture expands the thoracic and abdominal cavities and encourages the free activity of all the vital organs. It strengthens the back and abdominal muscles. It practically necessitates deep breathing and makes it a habit. No ventilating system can possibly be as large a factor in getting good air into the lungs of children as a seat which causes them to sit with chest expanded. The system may ventilate the room, but it is the posture that ventilates the child. If the seat, back, and

desk top are adapted for it, this erect posture is the most comfortable possible and can be longer sustained without fatigue than any other.

The common type of seat and back tends to push both hips and shoulders forward. In fact, the structure of the spine is such that both alike will go forward, compressing the thorax and abdomen, or both will go backward, expanding these cavities. Let the reader try pushing the shoulders forward and the hips back, or vice versa. The effect of the usual desk is the gradual sliding down and doubling up so familiar to every teacher and pupil. Not only does this compress lungs, heart, and digestive organs, suppressing their functioning and weakening their resistance to disease, but the spine, suspended from its two ends, tends to sag into a permanent curvature, resulting in stooped shoulders and a shambling gait.

If one sits erect, with book lying on the ordinary desk top, the letters are too far away for proper visual focus and are enormously foreshortened, with corresponding illegibility and eyestrain. If he stand the book on end, he must use both hands to hold it and slide down in the seat to reduce the visual distance and the foreshortening. If he lean over the desk to get the right distance, there is severe strain on the back and neck muscles. In his natural and rightful efforts to relieve this strain he rests his head on his hands, with his eyes about eight inches from the book, necessitating a severe strain of convergence, shading his book with his arms, cramping the vital organs, bending spine, and relaxing the supporting muscles. The most perfect lighting is wasted when the book is not held in proper relation to the eye and to the light. The correct position of the book places it perpendicular to the line of vision, with the light shining squarely upon the page, and fourteen to sixteen inches from the eye, varying with the size of print and acuity of vision.

Seating and posture training. Undoubtedly children need training in good posture irrespective of the shape or adjustment of the seats, but even incessant nagging by the teacher for one position is ineffective training as against the nagging of tired nature for any position but that one. Where hygienic seats are not provided, it is even more imperative that frequent change of work and position be provided in the schedule and by the teacher's methods. The old-fashioned recitation benches at the front of the room, however uncomfortable in themselves, may afford considerable relief through mere change of position. Nervous and irritable children suffer serious injury from misfit and uncomfortable seats. Spinal curvature, anæmic conditions, weak eyes, and all sorts of troubles in discipline are some of the evils which are aggravated by bad seating. Cushions, foot rests, or whatever may reduce the waste of energy in nature's protests against uncomfortable confinement to nonadjustable seats should not be denied. However faithful the teacher's admonitions, children lack muscular strength to sit erect for any considerable length of time. This weakness of back muscles is fostered by the usual method of seating but overcome by habituation to seats correctly formed.

Renovating defaced desks. There are still some schools where children have so little interest in their work and so little respect for public property, so little realization that it is their own property, that the marking and carving of desk tops continue. In others the hieroglyphic inscriptions of past ages of pupils yet disfigure the furniture and discourage efforts to keep the room appearing well. By devoting fifteen minutes to scraping the desk tops a most admirable lesson in manual training, as well as in thrift and in property values, is taught, and a material increase in value of school equipment is accomplished. Each child is equipped with a piece or two of broken window glass and

a little sandpaper. Where the cuts are very deep, the janitor or a large boy with a plane should supplement their efforts. A fresh coat of varnish stain applied on Friday evening will be ready for use by Monday morning. The boys of one town school more than paid for a good manual-training outfit by renovating old desks which the school authorities were about to throw away.

PROBLEMS

1. Observe a roomful of children studying. What proportion of them assume a hygienic posture at their work and for what proportion of the day?

2. Describe the positions the children take in order to relieve eyestrain and fatigue of the back muscles.

3. On how many of the books is the light falling squarely or so as to illuminate adequately?

4. What is the usual angle between the book and the child's line of vision?

5. What proportion are sitting with the small of the back curved backward and the internal organs compressed?

6. Ask the children to take a deep breath and note the change of posture necessary to do so.

7. Arrange a comfortable seat with a restful support for the small of the back. Then provide a support for your book in the correct reading position, sixteen inches from the eye, at right angles to the line of vision and with the light shining squarely upon it. What advantages would there be in having children do all their reading in such a position?

READINGS

BANCROFT. The Posture of School Children, chap. xxiv.
BURGERSTEIN. School Hygiene, chap. iv.
DRESSLAR. School Hygiene, chap. v.
TERMAN. Hygiene of the School Child, p. 81.

CHAPTER VII

APPARATUS

Two ways of wasting. There is as little economy in paying teachers salaries and denying them the apparatus necessary to make their work effective as there is in employing any other class of workers and denying them requisite tools. About sixty per cent of the cost of the schools is paid for teachers. Five dollars expended on apparatus for every hundred paid the teachers would be invested at one hundred per cent profit if it increased teaching efficiency only ten per cent. The actual average expenditure for the purpose is probably well within one per cent of the salaries, while it is evident that the use of apparatus often adds as much as fifty per cent to the value of the teaching. A niggardly policy as to equipment thus wastes much of the school funds.

But there is another aspect to this problem of waste. Much of the apparatus on the market is more profitable for the dealer than for anyone else. Prices are often exorbitant and educative values slight. The mode of purchase is too often such as to make people suspicious of the wisdom of the investment. Shrewd and extremely agreeable agents of the supply houses have brought about the purchase of vast quantities of charts and other equipment either totally worthless or practically so for the teachers and schools to which it was supplied. School boards, professing no technical knowledge, properly call upon the educators for a statement of their needs. The teachers, regarding it as a mark of efficiency to get everything possible for their schools, have occasionally named amounts as large as they dared or listed

everything in the supply company's catalogue which there was a remote chance of using or getting. Some things are "recommended" out of mere curiosity or a vague idea that they would be nice things to have. Expert educators, like other experts, are sometimes tempted to give advice which the laity is in no position to question but which is not based on a practical business consideration of the relation between the client's need and his available means. Ambitious teachers should remember that efficiency is attained by economy of expenditure as truly as by magnitude of results. An honest saving attitude should insure their asking for only the materials that they will use and their using the materials which they get. Teachers and officials should especially be on their guard against the deplorable tendency to regard a "public job" as legitimate opportunity for undue profit. Printers, contractors, and dealers, often and without shame, expect this form of graft and resent watchful economy on the part of the buyer for the public. But for the frequent exceptions it would seem superfluous to say that common honesty demands that a teacher intrusted with selecting equipment should use the same watchfulness and strictness that he would if he himself were to foot the bill.

The useful and the useless. Equipment is likely to be more appreciated by the children and more profitably used by the teachers if acquired gradually, a few pieces at a time as needed, than if a "complete outfit," selected without reference to the particular class, is "installed" all at once. Simple equipment which will accomplish the purpose is far more educative than the more elaborate. There is an increased teaching value in the fact that the pupil sees just how each part is made and put together and a still greater value if he makes or assembles it himself. Elaborate instruments tend to destroy the value of a class demonstration by losing the experiment in the instrument. Instruments of

precision for quantitative science work; globes and maps which must be accurate to be useful; charts or models for study in lieu of objects; art models which must always be true art to be valuable; practical time-saving contrivances entering only indirectly into the teaching, such as devices for sharpening pencils, ruling, cleaning, facilitating the gathering, dissecting, and preserving of specimens, — these things it is economy to buy just so far as they will be used and cared for.

Charts for teaching, reading, writing, or spelling are often worthless. The same is true of chart outlines of grammar, civics, arithmetic, or any outlines which do for the children the very organizing which it is the highest function of teaching to get the children to do. Such charts encourage stilted and deductive teaching at just the point where inductive development and abundant freedom should prevail. The live teacher and the blackboard are incomparably better for almost any phase of teaching the fundamentals. Education is accomplished only by the pupil's thinking, and any apparatus which purports to supply the thinking predigested should be regarded as a thought preventive. Textbooks may well provide forms for outlines, and teachers can do no better reviewing than working up outlines into chart form in class. A ready-made organization and a stimulus to organization should be regarded as at opposite poles of teaching value.

Pupil-made apparatus. A very great deal of the apparatus should be made by the children themselves. It should never be forgotten that making apparatus or assembling it is as genuinely educative as any other task at which a pupil is likely to be engaged, and the construction of it is usually as directly instructive as any lecture, study, or experiment in connection with which it is used. Making the apparatus is so much more important than having it that a stock of simple parts which may readily be assembled in different ways for different purposes is to be preferred to an outfit of

distinct and perfected pieces all ready for use. Lack of time is not a valid objection to the preference for home-made equipment, since time can be no better spent than in making it. With a more elastic schedule and organization, it is not hard to find time for many things which at first appear impossible. The brighter pupils are in need of occupation for spare time to keep them out of mischief. Others simply cannot learn the abstract principles without much of the concrete manual construction. If teachers would but cease hurrying to "get over the ground" and using themselves up in the futile grading-grind or in the "preparing for experiments" in which pupils have no part but to "see the thing go off," they could plan to make the preparing as educative as the going off and give their pupils the benefit of both. A wise teacher, instead of spending an hour before the class getting ready and an hour afterward in putting things away or keeping the class waiting while he performs the instructive preparation work, will so adjust the classes that some pupil or small group will be free to set up the apparatus for the class experiment and another to clean and put away the parts afterward. Well-organized groups can do these things quickly in the class period, especially in high-school "laboratory periods." The difference between an expert and a laborer is that the laborer works his hands and his heels to save working his head, while the expert makes use of his head first and most. Many teachers seem striving to bring their occupation entirely within the class of common labor. Even the consciences of the conscientious ones seem to drive their hands and perfunctory brain processes rather than their higher judgment. When their doing so robs the child of opportunities for learning, these supposedly conscientious ones are pedagogically as great sinners as those lazy ones who do too little.

Instruments of precision. Obviously, the whole purpose of any piece of apparatus is to work. To the extent in which the teacher's time or labor or ready-made apparatus is needed to this end these must be provided or the experiment omitted. Telling what ought to have happened if it had come out right is best done without any apparatus. Object lessons in failures are worse than none at all. Experiments that require delicate and complex apparatus are not necessary or pedagogically wise in elementary courses. Advanced courses are a very different matter. Instruments of precision must necessarily be precise, and delicate measurements cannot be made with crude equipment. But nature and the everyday facts of industry and life afford such a wealth of experiments of the most instructive sort that elementary science classes have little need for the sort of experiment that pupils cannot set up or find already set up and practically operative in the neighborhood.

Familiar contrivances. Some of the ordinary commercial electric and mechanical contrivances should be made familiar because of their direct practical interest and importance. The National Education Association has secured the publication and free distribution to members, by interested manufacturing concerns, of a series of charts and monographs showing the principles and construction of the sewing machine and certain familiar electrical apparatus. This valuable and suggestive series indicates that many ordinary instruments and machines, accessible almost anywhere, might be so used. A typewriter, electric fan, automobile, the telephone, call bells, clocks, spectacles, microscope, a swing, a warehouse truck, furnace, radiator, refrigerator, ice-cream freezer, or any other familiar instrument or machine is an ideal point of beginning for lessons in physics. Things that are in actual use and demonstrating their worth daily have peculiar value as teaching apparatus.

Good tools. It is important also that the children be supplied with adequate tools for making well and easily the things they are required to make. A good equipment of simple wood-working and metal-working tools and a supply of stock materials can be bought for the cost of a very few special instruments for demonstrating single principles. There should be adequate equipment to demand of the children that whatever work they do shall be done neatly and accurately. Workmanlike products should be required as far as possible, but these are possible only with good tools well kept.

Primary materials. For primary reading, phonics, and number work the sight or "flash" cards are quite valuable. They are supplied, at little or no cost, in connection with some primers. But a child by making such a card will remember what is on it better than he would by seeing it many times; and the card which a classmate made has a meaning which a bought one cannot have. Even first-graders can trace over the teacher's letters with brush or crayon, the neatest cards being retained for permanent class use. A set of large rubber-stamp types may be used by the children in making cards and charts. Restless children of older grades are delighted with the "busy work" of making these cards for the little ones. With large sheets of wrapping paper the teacher and pupils may make charts, and these homemade charts have a vital significance that ready-made ones never can have. Even if a child has not the actual training of making it, he feels that it belongs to his class and that it is a help in his learning.

Arithmetic measures. For arithmetic there should be a liberal supply of the standard weights and measures, and these should be made use of for every possible purpose. Foot rules and yardsticks and meter sticks, duly subdivided, should grow familiar through constant use as pointers and

rulers. Quart cups and peck measures may well be used constantly and consciously as containers for every practicable purpose. There will then be little to teach regarding them. There may also be cube-root blocks where this topic is taught. Beyond these little if anything should be bought. All sorts of counters, even to an abacus, may be very profitably prepared by the children themselves. Geometrical forms should be constructed out of stiff paper as class exercises. The materials for arithmetic teaching are at hand everywhere in the very things to which arithmetic is intended to be applied.

Maps. A good set of maps, clear and not too detailed, should be provided in every classroom. During the days or weeks that a continent is being studied, its map should be before the pupils' eyes constantly. There should be a similarly vivid map of the state, county, or town. Few pieces of equipment are more useful than outline blackboard maps. These can be purchased on cloth blackboard which rolls up as an ordinary map. They should be used very extensively for drills and reviews and in almost every sort of geography or history recitation with the aid of colored crayon in the hands of the children. A globe of about twelve inches diameter and a blackboard globe should also be accessible. The best relief maps are so preposterously out of proportion and out of all semblance to the things which they are supposed to represent that they are of little use as models. Relief maps may be made by the class with some benefit by using a mixture of salt and flour, provided their disproportions are appreciated. The sand table likewise can readily be made by the pupils but should be used with caution. In the presence of natural phenomena, that are abundant wherever water falls or runs, illustrating erosion by means of the sand table is a pitiful makeshift. Every creek, stream, gully, or even a back yard after a heavy rain is a hundred times better than the sand table.

Several particularly valuable series of maps, which should be freely used in the schools, may be had at a nominal price from the United States Government. These include the sectional topographic maps furnished by the United States Geologic Survey, the pilot charts of the Hydrographic Office, the meteorological charts and the daily weather maps of the Weather Bureau and the maps of the Land Office and Post Office departments.

Stereopticon. Some satisfactory form of stereopticon or projectoscope should be a part of the equipment of every school, if possible. With this there should be a constantly growing accumulation of the best illustrative slides and pictures attainable for the study of geography, history, literature, art, science, and every other subject which can be made to appeal through visual representation. The National Geographical Magazine is particularly useful. A moving-picture machine is, of course, desirable, but the expense of getting the high-grade educational films is still so great, especially of getting them at times when they will correlate well with the studies, that their service must be mainly for social-center uses supplementary to the courses of instruction rather than an integral part of them.

Library. The school library is now so universally recognized as an essential part of the school as to need no discussion. Provision should be made not only for bookcases or shelves in which the books will be well protected but for an adequate cataloguing and charging system. One excellent measure of a teacher's efficiency is the extent to which his pupils make use of the working part of the library; but to make any extensive use possible there must be a working part, and that means a live, growing library, closely correlated with the course of study.

Museum. A school museum, though less common as yet, should be a most valuable adjunct of every school library.

This should be incidentally a storage and display room for special apparatus not in regular use, whether purchased or homemade. It should contain the constantly growing collections of relics, biological specimens, products, minerals, pressed leaves, flowers, or butterflies; also models, illustrative material, and specimens of the best drawings and written work of each year. It should grow not only by additions but by substitution of better specimens for poorer ones. It should represent the enthusiasm and industry of the school rather than mere expenditure by the authorities. Thus it will serve as a constant stimulus to intelligent collecting and to excellence in achievement. No greater reward should stimulate the child than the prospect of having his specimens or his work placed in the permanent museum. A system of labeling should be adopted which will in itself be a standard of neatness and which will give the scientific classification or other useful data, the date of accession, and particularly the name of the maker, collector, or contributor. The collection may include anything from primary spelling lists to traveling art exhibits, or from a collection of postage stamps to a manufacturer's exhibit of agricultural machinery.

Phonograph. A good phonograph which will play the best standard records must now be regarded as an almost indispensable adjunct of a well-equipped school. Its uses are so numerous, entertaining, and instructive as to make it a most profitable investment. Routine marching of classes; regular accompaniments for class singing, indoor and outdoor games, gymnastics, calisthenics and folk-dancing; vocal and instrumental instruction and community concerts,—for all of these this instrument is invaluable.

Playground equipment. Playground equipment likewise adds tremendously to the interest and power of the school. Even a small school may have a sand bin, swings, a slide

for the little children, horizontal bar, volley-ball and tether-ball outfits, croquet set, basket-ball court, baseball diamonds, running track, and jumping pit. Other apparatus may be added as it may be found useful. Mr. H. S. Curtis shows that, with the aid of the boys, an effective equipment for a small school may be constructed for from eight to twenty dollars. "Very likely to most rural teachers," he says, "the program thus outlined seems ambitious, perhaps impossible of realization. It does certainly require that the teacher should have the coöperation of the children, and to some extent the sympathy of the neighborhood as well. But if she wishes the coöperation of the children, what better method can there be than to do something in which they are interested? It must be remembered too that it is quite as important and legitimate a part of modern education for the children to learn to work for the common welfare as it is to study arithmetic or geography; that the most of the things they will do will be the best kind of manual training and may properly be done in school time if the directors are in sympathy with the work." [1]

Care of equipment. A reasonable sense of responsibility for public property, any consideration for the teaching values of the equipment or a care for the development of civic righteousness among the children, would demand that adequate provision be made for the careful protection and preservation of all books, apparatus, and equipment. This is incomparably easier to do if the children are partners in the matter and have spent time and energy in preparing and collecting the materials. The apparatus which they have helped to make they will be zealous in protecting from others as well as in using carefully themselves. Their interest in the protection and preservation of equipment may be made still more keen by their coöperation in the making of cases and

[1] H. S. Curtis, Play and Recreation, p. 51. Ginn and Company.

cabinets for it and in cataloguing, checking, and caring for it. Elected monitors are most desirable custodians. By all means let there be full enjoyment of the sense of joint ownership and joint responsibility. Dilapidated or disfigured articles should invite not heedless handling and destruction but careful repair or replacement by better specimens.

General principles quoted. The following admirable summary of this topic is given by Dr. F. B. Dresslar[1]:

The general principles which seem to be emerging to guide us in the matter of school apparatus may be summed up and stated as follows:

1. The more thoroughly teachers are educated and trained for their work, the less need for specially prepared and complicated apparatus.

2. The better the curriculum is adjusted to the needs and capabilities of children, the fewer requirements for experiments or methods demanding apparatus beyond the power of the teacher to supply.

3. The simpler the apparatus and the more natural the experiment or method, the more satisfactory are the results for children of the elementary and high-school grades.

4. Apparatus made by the pupils and teachers working together, or by the pupils themselves, often serves to impress the essential purpose of an experiment to better advantage than more perfect laboratory appliances furnished ready-made.

5. It is better for the pupils themselves to perform a simple significant experiment illustrative of some important truth than it is for the teacher to perform in their presence a more elaborate experiment directed toward the same end.

6. School appliances designed to illustrate those forces and phenomena of nature which have proved themselves significant are more important than those which give spectacular results not readily seen outside the schoolroom and less obviously related to the immediate needs of life.

[1] Article on Apparatus in Cyclopedia of Education, Vol. I. The Macmillan Company.

7. Good teachers are increasingly utilizing machine shops, electric-lighting plants, water systems, scientific agriculture, and manufacturing industries of all sorts to supplement school experiments and to render them more significant.

There is a growing use of photographs, picture post cards, illustrated magazines, stereopticon slides and projectoscopes to bring distant scenes within reach of school children. The only danger here is that such material may absorb an undue share of time and the real world around them may never be made significant.

PROBLEMS

1. From the records or from careful estimates for the past few years determine what per cent of the cost of teachers in your school or city has been expended on apparatus.

2. Estimating the increased value of the lessons in which it was used, what profit on the investment would you say this apparatus has earned during the past year?

3. Estimate likewise the value of any special sets or pieces of apparatus. Which of it is indispensable? Which of it could be dispensed with without detriment?

4. Study the equipment listed in any supply company's catalogue as follows: (*a*) Which pieces are inherently instructive? (*b*) Which are labor-savers? (*c*) Which save labor that would in itself be educative? (*d*) For which could homemade equipment be profitably substituted? (*e*) Which would be used too little to justify purchase for your school?

5. List the physical principles involved in the construction of several familiar machines and instruments, such as the typewriter, telephone, gasoline motor, thermos bottle, etc. Would these be satisfactory apparatus for teaching these principles?

6. Study each available chart as follows: (*a*) Does it afford information not readily accessible in objects or in textbooks? (*b*) Does it stimulate or forestall organization by the pupils? (*c*) Could it have been made by the class profitably? (*d*) Summarize all the arguments for and against its use.

7. Plan five collections of natural specimens or products of your section the making of which would be particularly profitable for the children in school.

8. Plan a library and museum for your school indicating arrangement of shelves, cupboards, wall and cabinet displays. If there is not a special room available, plan for utilizing available space in one or more classrooms or office rooms. If a good beginning has already been made, plan improvements and extensions.

9. Make an estimate of the cost of the improvements planned, all labor and materials possible being contributed by the school.

10. Make similar plans and estimates for extensions and improvements of the playground.

READINGS

BURKS. Health and the School, chap. xv.

CURTIS. Play and Recreation, chap. v.

DODGE and KIRCHWEY. Teaching of Geography in Elementary Schools, chap. xvii.

LINCOLN. Everyday Pedagogy, chap. iv.

United States Bureau of Education

Bulletin No. 35, 1913, "A List of Books Suited to a High School Library."

Bulletin No. 48, 1914, "The Educational Museum of the St. Louis Public Schools."

CHAPTER VIII

SCHOOL HOUSEKEEPING

Standards and traditions. The housekeeping of a family or of a community is not a matter of time or of means but of standards. To set right living standards is among the school's highest privileges. It is done not through study and instruction but through ideals and training, not by set courses in domestic arts but by daily effort and environment. It is a sad commentary on the educative influence of a public school that it inures its pupils to housekeeping conditions which would be tolerated in only the worst of the homes from which its pupils come. The most refined children cannot attain their mental development in the midst of littered and mud-tracked floors and walls disfigured with scrawls and spitballs without losing some of their dislike for coarseness and ugliness. Nor can the children from the crudest homes learn in the midst of scrupulously kept surroundings and tastefully tinted walls adorned with masterpieces of art without imbibing something of an enduring love and ambition for such environment. Most of the formal lessons are of no greater practical value to the community than is the subtle growth of ideals that make for worthier manhood and womanhood, and not least among these is the ideal of tasteful, well-kept surroundings. The difference between the thrifty, well-kept appearance of some communities and the shiftless, dilapidated appearance of others is not one of wealth but of ideals. It is more economical to keep things up than to let them run down. It is cheaper to be neat and orderly than to be slovenly. But

neighborhood traditions far more than any doctrine or precept determine the way the people live. The peculiar and serious sanitary dangers of the place where children congregate for their daily work make another powerful argument for the highest standards of school housekeeping.

Janitors. Trained or even intelligent janitors are too rare to warrant educators in shifting this responsibility from their own shoulders. Janitors must ordinarily be patiently trained, systematically instructed, and ceaselessly supervised by those in charge. It is economy to pay salaries sufficient to employ janitors of ability and reliability. They should be such as can manage the heating and ventilating apparatus with economy and efficiency. They should be such as can aid the management of the school by supervising the basements and playgrounds and by taking entire charge of the premises out of school hours. They should take an active pride in the sanitary conditions and attractive appearances of the school. But it must rest upon the teachers and principal in charge to see that these things are done. There must be no blaming of neglect upon the janitor. There must be no neglect to blame. Some of the definite requirements of janitor service are the following:

Floor cleaning. Floors must be cleaned daily in all rooms that are in regular use. The cleaning must always be done after the school is dismissed for the day and with windows wide open. It must be done thoroughly with special attention to the corners and half-hidden crannies about the feet of the desks. The advantage of desks that offer no such broom-proof harbors for dirt is obvious. A schoolroom should never be dry-swept. It is better to leave the dust on the floor than to scatter the more dangerous part of it through the air and over the furniture. Dry brooms remove the larger trash which, though unsightly, is ordinarily not insanitary; but the dust, which there is reason to fear,

remains in the room, where hands and garments will gather it up and breathing will gather it in. Several means are used for preventing the rising of the dust. Sprinkling leaves the dust in some spots unmoistened while converting the rest into mud, most of which sticks to the floor until it dries and returns to dust again. Moistened paper or sawdust strewn over the floor has the advantage that most of the dust sticks to it and is swept out with it. Oiled sawdust is even better. This may be supplied very economically by keeping a barrel of common sawdust and occasionally sprinkling oil over the top, allowing it to drain through. The sawdust is used from the top when the surplus oil has thoroughly drained off. The application of the oil directly to the floor at intervals of a few weeks is perhaps as effective for keeping down the dust, for dust which becomes saturated with oil is too heavy to rise into the air, but the sweeping is usually not as thorough and the excessive oil is often quite objectionable, particularly to long skirts. It is also more wasteful of oil.

Vacuum cleaning is undoubtedly the best solution of the problem of getting dust out of the room. An installed vacuum cleaner with proper attachments for reaching every place in the room where dust or dirt can lodge is probably the most hygienic and economical method in large schools. Portable cleaners which suck up the dust but drive the same air back into the room are said to act as redistributors of bacteria and the finer dust particles. They should be used with caution.

Dusting. The "deadly feather duster" must not be tolerated in school. Dry brushes of any kind merely *move* the dust. They cannot *remove* it. The most effective method of dusting furniture is *wiping* with large cloths, which should be washed out frequently and very slightly oiled with kerosene. A heavy oil should never be put on furniture

or in any place where hands and clothing must touch it. A very little kerosene in the water in which the cloths are rinsed out is perhaps sufficient. Just enough is wanted to make the dust cling to the cloth but not enough for the oil to cling to the desk. Desks should all be wiped off every morning before school opens. The dust of the day and of the sweeping settles during the night.

Disinfecting. At least once a month, and at any time when there has been chance of infection by contagious disease, all the desks and door-knobs, woodwork, stair-rails, window-trim, and every place where dust might find lodgment or germs cling with the oil and perspiration of the hands should be thoroughly wiped off with a strong approved disinfectant. This thorough wiping is really not a very tedious task if done with large cloths and in an orderly and systematic routine. Globes and apparatus not readily cleaned should be kept under cover when not in use. The making of neat cambric covers for apparatus is an appropriate exercise in domestic art for the smaller girls.

Chalk dust. Chief among dust problems is the one of chalk dust. The direct injury which may be done to lungs and air passages by the flying particles can hardly be overestimated. It is not the use of crayon that is harmful but the dry erasing and the tapping of erasers together to rid them of dust accumulations. Erasing with moist sponges or cloths remedies this difficulty but introduces others, in the way of keeping the sponges just moist enough to avoid muddy streaks on the board. Chalk troughs which hold both erasers and crayons out of the dust by means of wire coverings or raised center strips are on the market or can easily be provided by a janitor or manual-training class. The construction of the chalk trough must permit its being cleaned easily by the janitor. Eraser cleaners of various types and degrees of efficiency are also available.

Catch-alls. Constant watchfulness on the part of the teacher is necessary to prevent accumulations of trash in cupboards, closets, drawers, and other out-of-the-way nooks and corners, and particularly in the desks of the pupils. In the basement and storerooms a janitor of inferior sort is very likely to have accumulations which violate all standards of sanitation and fire protection.

Educative values and pupil participation. It is due the children that they should receive not only the suggestive values of good school housekeeping through the conditions of the premises and building but also the direct values through active participation in the process. Keeping a room thoroughly clean is a fundamentally valuable educative experience for any boy or girl. Too many of them are deprived of this privilege at home. Dusting and "tidying-up" a room should become genuinely pleasurable, far more pleasurable than enduring a room that lacks it. It is a poor class that would not rather keep its own room cleaned up than to have the task done in slipshod fashion by the janitor. At least the pupils should make it possible to demand of the janitor thoroughness in the sweeping and heavier tasks, by themselves doing the dusting and lighter cleaning. Assuredly parents who do not provide adequate funds for proper janitor service cannot complain at having their children do anything necessary to keep in a seemly and sanitary condition the place where characters and ideals are being formed. Under wise guidance the children themselves will come to take a pride in the spotless condition of the room. Competition between rooms may well be encouraged. It should become a matter of pride and credit to each pupil that his own desk and its immediate environment is always clean. He should gladly pick up the trash when "somebody else put it there" rather than have it there at all. Monitors with the backing of

the social spirit of the room will stimulate the less responsive. The inside as well as the outside of every desk should always be left in order. Each desk should be provided with a dust cloth if necessary in order that it be kept spotless. Monitors should see to it that the blackboards are left perfectly clean, the teacher's desk and every piece of apparatus in proper order. Broom and dustpan should be convenient so that mud tracked in may be promptly brushed up at any time of the day.

Summary of National Education Association recommendations. The following "Summary of Recommendations" made by the Committee on Janitor Service to the Department of Science Instruction of the National Education Association (1913) is a useful statement of how practical and educative values are gotten through pupil coöperation. Such supervision by pupils does more than secure effective janitor service. It teaches facts of value which are not in textbooks, and more important still are the habits and ideals which it establishes.

To standardize janitor service, or school housekeeping, the first step is to get the facts. Every building, as every room in it, has its own conditions to be learned and controlled.

This can be done with least expense and greatest effectiveness by enlisting pupils' coöperation. Expense is negligible. Effectiveness is along three lines: (1) Practically constant supervision which good housekeepers find indispensable; (2) permanent records of sanitary details in place of guesses and opinions; (3) interest of future voters and home-makers in such details by practice in regulating them.

Health officers. Appoint a group of health officers in each classroom, for periods so limited that each child has service once a year. Credit their work to "physiology and hygiene," or "nature study," "domestic science," physics, chemistry, biology.

Temperature. Health officers shall read thermometers hourly, record readings in a substantial book, chart them (for example

nurses' clinical charts) on a blackboard reserved for it, where pupils, principal, janitor, and visitors can see perhaps a week's record at a glance. When conditions permit, they shall readjust heat sources, ventilators, or windows to secure proper temperature, which, when artificial heat is used, should never exceed 68° F. Pupils over eight years of age can do this; sometimes younger.

Dustiness. In high schools health officers can measure or estimate it by cultures, or by the "sugar method" recommended by the Committee on Standard Methods for the Examination of Air. The standard is two thousand particles (visible under a two-thirds inch objective) to a cubic inch of air.

In elementary grades they can wipe surfaces with a *clean* cloth. If dusting was properly done, nothing is wiped off. Floor, woodwork, and furnishings should be as immaculate as in the best-kept home or hospital. This test should come at the beginning of the session.

Health officers should be responsible for the moist erasing of chalk, but pupils should not be required to dust rooms. Officers should record sweeping of room or corridor while pupils or teachers are obliged to use the rooms. (Severe penalties for this violation of sanitary rights should be enforced by school boards.)

Elementary pupils over eight years of age can do this, including record keeping.

Relative humidity. Officers over eleven years of age can be taught to use safely the whirling wet-dry bulb thermometer recommended by the United States Weather Bureau. The danger of breaking is lessened by tying to the back a stick projecting a few inches beyond the bulbs. One instrument is enough for an ordinary building. Relative humidity should be recorded and charted about a half hour after the session opens. It can well be done later also. Where possible, officers shall readjust artificial sources of humidity (evaporating pans, steam radiators, etc.) or windows, to maintain relative humidity at 50 per cent.

Air currents. When ventilating flues have no current indicators of their own, officers should measure currents with an anemometer (one is enough for the usual building), or estimate them with candle or joss stick. Pupils over eleven can use them, perhaps younger. The *effectiveness* of air currents is best learned

by comparing the smell of schoolroom air with that out of doors — the standard of freshness. Air currents and freshness should be recorded at least once at the middle of each session. Officers should make such readjustments of windows or ventilators as indicated.

Cleanliness. Cleanliness of washbowls, waterclosets, and of any other part of building or yard should be recorded once each session. Dirt on windows sometimes diminishes illumination one quarter to one third, measured by a photometer. The instrument is costly, and until a less expensive method is devised the opinion of health officers can be given. Dirty windows are important in rooms badly ventilated or specially exposed to smoke and dust. Such windows sometimes need washing once in two weeks. Pupils over eleven, possibly younger, can do this reporting.

General suggestions. Health officers from older grades can be appointed for rooms where pupils are too young for any special detail.

When a fault is found beyond pupils' function to remedy, it should be reported immediately to the proper authority, probably the principal. It is wise never to "interfere with the janitor." This report and the result following should be stated in "Health Officers' Permanent Records."

For other than classrooms and for corridors, groups can be specially appointed, their duties being suitably modified.

Some, if not all, of these exercises in practical sanitation can be undertaken quietly at any time by any teacher in charge of any room. One or the other is already proved practicable in individual schools within the last ten years. The accumulated data will be invaluable. It is the practical first step in reducing "school diseases," including tuberculosis, which increases all through school years (except in open-air schools) and among teachers has a mortality rate higher than among the general public.

These facts will help demonstrate that school housekeepers, like others, must be trained in sanitary methods. Janitors' salaries and their supervisors' often equal and sometimes exceed salaries of teachers, principals, and other trained workers whose responsibilities are no more serious, and who are carefully prepared and tested before appointment.

PROBLEMS

1. Make an abstract of the regulations of your state, county, or city regarding the cleaning of school buildings.

2. Inspect one or more schools thoroughly and make a detailed report as to their cleanliness.

3. How much of the cleaning can reasonably be required of the janitor service provided for each of these schools?

4. How much should wisely be secured through the children?

5. Prepare a set of rules for janitors to guide them in keeping the school cleaned properly. Study all such sets of rules you can obtain and adapt the best points to your school. Include provisions for corridors, stairs, etc.

6. Similarly sketch a set of regulations such as you would seek to have the children of a given grade prepare for their own government.

7. Study the advertising and, if practicable, samples of floor oils and disinfectants for school use.

8. From supply-house catalogues and other advertising media, make a comparative study of the advantages of brooms, brushes, self-oiling brushes, vacuum cleaners, and other appliances for cleaning.

READINGS

ALLEN. Civics and Health, chap. xiv.
DRESSLAR. School Hygiene, chap. xxiv.
PRUDDEN. Dust and its Dangers.
PUTNAM. School Janitors, Mothers and Health.
School Laws and Regulations (any available).

CHAPTER IX

HEALTH RESPONSIBILITY OF THE SCHOOL

A growing responsibility. Until the present era the Greeks were the world's most enlightened educators. With them schooling was first of all a matter of physical and spiritual development. In much less degree was it literary. Their curriculum had in it little of books and much of games. Their educated man became a model for sculptors. Their schools created no problems of hygiene or contagion. During the Middle Ages a contempt of the flesh,— associated always with the World on one hand and with the Devil on the other,— together with a blind dependence on authority and writ, narrowed the meaning of education to mere book study. Learning, unhappily, became associated with frail bodies, spectacled eyes, and aloofness to the affairs of men. This was bad enough for the individual scholar but, with the advent of democracy's universal education, modern schools have tended to impose the same medieval bookishness upon all classes, and furthermore have infinitely aggravated the difficulty by the sheer immensity of the educational machine. The modern school has caused its own peculiar hygienic problems, and until quite recently it has caused them much more rapidly than it has solved them.

Educational thinkers have always recognized the dangers of making school life too confined and sedentary. Locke and Rousseau plead eloquently for the "mens sana in corpore sano." Vittorino da Feltre in the fourteenth century, Salzmann in the seventeenth, and the Jesuits through several centuries, allowed liberally for physical exercise in their

systems of training. Others have permitted or expected it but usually as something outside of, rather than essential to, education proper. Formal recognition of hygienic dangers arising from the school work itself, and legal provision to combat them, seem to have begun with a French law of 1833. Official inspection of pupils and premises with reference to health conditions has been obligatory in all French schools, public and private, since 1887. Germany was considerably slower, while England and this country hardly woke up to the subject until the twentieth century. Already, however, there is more or less adequate medical inspection and health supervision in all but the most backward school systems, and the extension of such provisions is so rapid that statistics regarding them become out of date before they can be compiled and published.

A pressing social problem. Compulsory attendance, whether compulsion is by law, public opinion, or family ideals, has upset the process of natural selection which once eliminated the unfit from school (along with most of the fit). The schools have now become the great clearing houses not only for intelligence, social ideals, and standards but also for disease germs and whatever else may be passed about among the children of the community. It is well. The "common herd" share in the political and intellectual prerogatives of the few and they as freely share with the few those curses of disease and vice which are theirs by virtue of their being a common herd. Thus the public school is bringing about the brotherhood of man both by making the knowledge of the few accessible to all and by making the curses of the many the problem which all must solve in self-preservation. Public education makes imperative the conquest of contagion. Scarlet fever and diphtheria must go the way of yellow fever. Colds and typhoid must come to be considered like theft and arson. Crime may

be regarded more tolerantly as a disease, but disease less tolerantly as a crime.

Sanitary dangers and ideals. The frequency and extent of epidemics among school children and the terrible toll they have taken are sufficient accusation against the school as a disease-distributing agency. Few conditions could be conceived of more favorable for the transmission of infection than an insanitary school. Children come from every sort of home environment; they play in every sort of place; they come in contact with all grades of human beings, dogs, cats, ash-barrels, back alleys, and worse. Their soiled hands, sticky faces, and sweaty clothes are ideally adapted for carrying germs. Contamination from any such source may be readily distributed at school to every portion of the community by physical contact among the children, direct or through the medium of pencils, books, drinking cups, towels, or any other thing which they make use of in common. On the other hand, prevention more than keeps pace with the peril. "Safety first" applies to schools as well as to factories. The schools "of the people, by the people and for the people" shall at least not be guilty of those violations of public safety for which dairies, meat markets, and other private enterprises are promptly put out of business. So effectively have the precautionary measures been applied in the better school systems that, instead of closing the schools summarily on the appearance of an epidemic disease, the school is regarded as the safest place for children to be. Under proper sanitary conditions schools should no more close to avoid contagion than hospitals should.

General precautions. Precautions against contagion include at least the following: sanitary drinking fountains, lavatories, and toilets; elimination of common towels and drinking cups; insistence on clean hands, faces, and clothing; keeping hats and cloaks on separate and individual hooks or in

private lockers; prohibition of the chewing of pencils, pens, and books, or of the exchange of these or of handkerchiefs or other personal belongings; keeping the place free of flies and of all sorts of vermin disease carriers; regular and thorough cleaning of the rooms; disinfecting of desks, door-knobs, etc.; abundant flushing out of the air of the room; as much sunshine as practicable; and the prompt exclusion or sufficient isolation of all affected pupils.

Infectious sprays. Spitting, coughing, and sneezing are among the most dangerous of common practices. By this means there are sprayed out into the air countless globules of moisture to which microbes are clinging. These are breathed in by pupils or settle upon their desks, books, or persons and are soon communicated to their air passages thus giving rise to epidemics of colds, grippe, or worse. Every child should be vividly taught these dangers and rigidly trained never to cough, sneeze, or spit except into his handkerchief or other receptacle. The best receptacle is a piece of paper that is immediately burned.

Drinking-cup dangers. Nature's favorite mode of transporting germs is by the mouth. Common cups and open buckets are now almost everywhere prohibited by law. Individual cups in actual use are so troublesome as to be almost impracticable. Keeping them separate and clean is an unending nuisance, while the promiscuous lending results in their being neither individual nor sanitary. Paper cups, such as are provided in public places for a penny in the slot, are sanitary but rather expensive. Children may quickly learn to fold a sheet of clean writing paper into a very satisfactory cup for a single drink. However, there is no longer excuse for any of these inadequate makeshifts in a school's equipment. Sanitary drinking fountains alone should be tolerated as facilities for drinking. Where running water is available they require no attention, and the best forms come

as near to being perfectly sanitary as could be hoped for. From the many forms on the market those should be selected which the children cannot touch or inclose with their lips. There are also sanitary fountains adapted for attaching directly to a water cooler. These are sold at a very low cost. It is incumbent upon the teacher to see that coolers are emptied and rinsed out daily and scalded weekly. Rarely can janitors be trusted to attend faithfully to the water supply without supervision.

Clean hands. Clean hands must be made the conscious ideal and the fixed habit of children, and the first step to this end is the providing of abundant conveniences for keeping them clean. The same water used by several children or a basin which becomes grimy may well serve as a medium for communication of disease rather than as a preventive. The common towel is another evil which is now quite commonly prohibited by law. Its dangers need no discussion. Paper towels seem to be the most satisfactory solution, but some instruction and watchfulness is necessary to secure satisfaction and economy in their use. Individual towels, like the individual cups, are likely to be used pretty much in common and to become very much soiled. If used, some efficient routine plan of oversight is necessary.

The rural water supply. In rural sections where a local water supply is depended upon, special consideration must be given to this agency of contamination. Serious epidemics of typhoid and various bowel complaints have frequently had their origin in the country-school water supply. Few springs or small streams are sufficiently protected from the drainage of pigstys, cow lots, and human habitations to be fit for drinking. However clear and cold and sparkling, such water supply should not be trusted unless frequently passed upon by expert authority. Open school wells are

a favorite repository for the tin cans or other trash which children pick up about the premises. The far-off, mysterious splash in the darkness of the deep well is fascinating to a small boy. With the aid of well-bucket and dipper the entire well is almost certain to become a medium for the culture and exchange of mouth-carried germs. The water which is slopped about the curb soon trickles back into the well, carrying the surface impurities with it. Many such spots have become well-patronized hog-wallows, and even this has not lessened the faith of the ignorant in the healthful quality of the cold, sparkling water which is drawn from the depths by the slimy, "moss-covered bucket" which their innocency knew. At least, the well should be closed, a pump introduced, and the surrounding surface so protected by concrete that the drainage will be away from the well and seepage into it impossible. A driven or bored well is safer.

Segregation of suspects. In addition to these general precautions ample provision must be made for the prompt detection and elimination of every case of possible contagion. The medical inspector and the school nurse are the best agents for this protection, but where they are not constantly accessible, and to supplement their offices where they are, the teacher should be able to recognize the commoner symptoms and to take prompt and intelligent precautionary steps. To be on the safe side, every pupil developing a fever, sore throat, or eruption of almost any kind should be segregated from the school until the cause is known and treated and until the proper health authority has assumed responsibility for the case. The accompanying table indicates briefly some of the more pronounced symptoms of the frequent contagious diseases of children. The length of time during which the affected one should be excluded from school is also given and the time that children

who have been exposed to the disease but who do not contract it should be segregated for the protection of others.

All books etc. which an affected pupil has used and with which he has been in contact should be thoroughly disinfected or burned. His desk and other objects which may have been infected by or in the same manner as himself should be well washed with a suitable disinfectant as soon as he is suspected and segregated.

COMMUNICABLE DISEASES AMONG SCHOOL CHILDREN

Diphtheria. Symptoms variable and difficult to determine. Sore throat with white patches, swelling of lymph nodes in neck about angle of jaw, great debility and lassitude. Exclude patient until fully recovered and disinfected and cultures taken from nose and throat on two successive days contain no diphtheria bacilli. Exclude children exposed to disease until same culture tests have been made as are required of patient. When diphtheria appears, segregate promptly every child with sore throat until culture tests have been made. Get instructions from the nearest health authority as to taking cultures and getting them examined. Diphtheria is very contagious and dangerous. It is frequently distributed by means of infected milk supply.

Measles. Begins like cold in the head, with feverishness, running nose, inflamed and watery eyes, and sneezing; small crescent-shaped groups of mulberry-tinted spots appear about the third day; rash first seen on forehead and face. Rash almost disappears in cold air and returns in warmth. Exclude patient at least ten days and until recovery and disinfection. Exclude exposed pupils fifteen days from exposure to disease. Danger of infection greatest before rash appears.

German measles. Less serious but hard to distinguish from scarlet fever. Illness slight and sudden. Probably some feverishness, sore throat and inflamed eyes but no cold in head. Lymph nodes back of ears enlarged. Exclude patient as in measles and those exposed from eleventh to twenty-second day after exposure.

Scarlet fever. Onset is usually sudden, with headache, languor, feverishness, sore throat, and often vomiting. Usually within twenty-four hours the rash appears, finely spotted, evenly diffused, and bright red. Rash is first seen on the neck and upper part of chest, and lasts three to ten days, when it fades and the skin peels in scales, flakes, or even large pieces. The tongue becomes whitish with bright red spots. Eyes not watery or congested. Exclude at least thirty days and until all discharges have ceased and person is disinfected. Exclude others for seven days from last exposure to disease. Very contagious. Dangerous both during attack and from after effects. Peeling may last six or eight weeks. Great variation in type of disease. Many slight cases not recognized but equally infectious with serious ones. Milk specially apt to convey infection.

Smallpox. Sudden onset of feverishness, backache, and sickness. About third day a red rash of shotlike pimples, felt below the skin and seen first about the face and wrists; spots develop in three days and then form little blisters, and after three days more become yellowish and filled with matter. Scabs then form, which fall off about the fourteenth day. Peculiarly infectious, especially by any portion of skin or scab. Effectually prevented by vaccination. Exclude until complete recovery and disinfection. Exposed pupils excluded for twenty-two days after exposure or seven days after successful vaccination.

Whooping cough. Begins like cold in head with bronchitis and sore throat and a cough which is worse at night. "Whooping" develops in about two weeks. Vomiting after paroxysm of coughing is a probable symptom. Exclude patient one week after last characteristic cough and until disinfection. Exclude exposed pupils fourteen days if no cough develops.

Mumps. Sickness, fever, and pain about angle of jaw. Glands become swollen and tender, jaws stiff, and saliva sticky. Exclude for two weeks and until after disinfection. Exclude exposed pupils from fifteenth to twenty-second day after last exposure.

Chickenpox. Mild, possibly slight fever, rash appears on second day as small pimples, which in about a day become filled with clear fluid. Fluid becomes matter, spot dries, and crust falls off. Successive crops may appear until tenth day. Exclude until all scales

are shed, spots have disappeared and person is disinfected; at least twelve days. Examine head for spots. Exclude exposed children twenty-two days after exposure.

Sore throat (acute, septic form). Begins with sore throat and weakness. Throat diffusely reddened and may show patches like diphtheria. Exclude until recovery.

Disinfection of the person means that after complete recovery the child shall be thoroughly washed with soap and water, teeth brushed, mouth rinsed, throat gargled, and nose sprayed and douched with an antiseptic solution and that all clothing shall be thoroughly cleansed.

All these diseases are distributed principally by means of mouth spray emitted in coughing or by discharges from nose, mouth, or ears.

The information given here is intended only as first aid to teachers who are compelled to rely on their own resources in emergencies, and should never be made a substitute for competent medical advice or the decision of health authorities where these are accessible. The statement of symptoms given is by no means sufficient to determine positively the nature of the diseases, but should such symptoms be found, the teacher should promptly segregate the case until expert authority has passed upon it.

A civic lesson. It has already been pointed out that in dealing with such situations one has a supreme opportunity for teaching not only the immediate lessons of hygiene and sanitation — and these should be made as effective as possible by means of the object lessons so unfortunately supplied — but also the broader lessons of civic virtue. An invaluable problem for discussion is that of the right of any individual to attend school or places of business and amusement at the risk of spreading disease to others. Untold sufferings arise from the lack of popular sympathy with quarantines, fumigations, and sanitary regulations.

The worst obstructions to efficiency in these measures are the people whom they are intended to protect. It is for the teachers of the land to make the next generation willing and intelligent coöperators in all public sanitary measures.

The hope of human progress. Every child should be made keenly conscious that diseases of the human body can ordinarily be contracted only by receiving into the body germs which have come, directly or indirectly, from a diseased human body. Skin diseases are possible only from contact with a diseased skin or with something that has been in such contact. Intestinal disorders occur only from germs which have come out of a diseased body and have entered another body, usually through the mouth. Lung and throat troubles must enter through the mouth or nose. However many the media of transmission, a few precautions will provide against them all. If the skin is kept clean, if all wounds are kept disinfected and insect bites avoided, if nothing contaminated enters the mouth and no sprayed germs are drawn in with the breath, there could be no contagion and there would be relatively very little sickness. Even these simple principles may be summed up in one,— *cleanliness of the person and of that which is taken into it.* As nearly all infections are taken into the system through the mouth or through wounds, these gateways to the inner system must be unceasingly guarded with antiseptic sentinels. *To just the degree in which universal instruction and training through the public schools makes these principles of cleanliness fundamental in the life of all classes of people will human suffering be alleviated and human life prolonged.*

If only they are used with sufficient regularity and in sufficient abundance, Nature's disinfectants — supplied everywhere without cost and without stint — are the safest, surest, pleasantest, and most completely satisfactory. Fresh air, sunshine, pure water, exercise, rest; vigorous, wholesome

living in school and out; regular habits, personal cleanliness, hard work, peace of mind, and good cheer — these are the things that make school life safe and sanitary, hygienic and happy. Unnatural conditions necessitate chemical disinfectants, and while good school management must take cognizance of such artificial protection, its ideal is always to keep as far from the need of them as possible.

PROBLEMS

1. Read and summarize the laws or regulations regarding the control of infectious diseases which apply to the schools of your community.

2. Make actual inspection and report on the sanitary conditions of as many schools as practicable. Indicate which of the conditions might contribute to spread of disease. Make recommendations and estimate cost of remedying these conditions.

3. Prepare an outline of instructions to be given and special rules to be enforced at school (1) during an epidemic of grippe or colds; (2) in case diphtheria should be discovered among the pupils.

4. Prepare a detailed statement as to the means of disinfecting (1) desks, (2) books, and (3) room.

5. From the best data available make an estimate of the money loss on account of the children alone, due to the last epidemic in your community. Include cost of time and of schooling wasted; of medical treatment. Make some statement of the inconvenience, anxiety, and suffering caused. Consider also the incalculable loss from deaths. Make a comparative statement of the probable cost and inconvenience of taking steps to prevent such an epidemic.

READINGS

See next chapter.

CHAPTER X

HEALTH INSPECTION AND SUPERVISION

The four responsibilities. In pointing out in earlier chapters that defective lighting, ventilation, heating, seating, and other school conditions may actually produce eye defects, spinal curvature, and nervous disorders and increase general susceptibility to colds, pneumonia, tuberculosis, and other physical ills, we have sought to establish the first demand of school hygiene; namely, that *no defect or disease shall be caused by the school or by its requirements.*

A second demand has been the burden of the preceding chapter — that *no disease shall be communicated through the agency of the school.*

The public school's responsibility, however, does not end with these negative requirements. It is also demanded that, as far as possible, *the presence of disease or defect shall be detected by the agency of the school and parents be advised and guided in securing remedial treatment.* This problem is the purpose of the present chapter, but we may add here that there is a fourth demand; namely, *the school shall provide as a part of its curriculum such exercises and training as shall relieve, so far as possible, existing physical defects among the pupils and develop their physical capacities to the fullest.* The discussion of this fourth demand is not within the scope of this work.

The waste from physical defects. Even though the physical defect be not contagious, it reduces the learning power and permanent efficiency of its possessor. The school avoids wasting its own energies and the state protects itself

against the burden of helpless citizens by subjecting all school children to thorough medical examination and supervision. The principle is but a logical extension of the whole principle of public and compulsory education. Both compulsory education and compulsory medical inspection are primarily measures of economy and social self-protection. Adenoids, decayed teeth, troublesome eyes, or other easily remediable defects quite commonly mean one or more years of retardation for the sufferer. Each year of retardation means the loss to the state of the cost of educating the child for the year. It further means the waste due to the less efficient work of the teacher and of the entire class which are hampered by the drag of the deficient pupil. Worst of all, it probably means the waste of a large proportion of the child's efficiency in subsequent years during and after school life. Twenty-five to fifty per cent of the learning efficiency of a child may be lost because of some slight defect of which he and his parents are ignorant but which may easily be detected and remedied with the aid of school inspections.

The extent of these nonepidemic defects among the twenty million school children of the United States is indicated by the following summary based upon the results of many investigations :[1]

Not far from 2,000,000 (10 per cent) are suffering from a grave form of malnutrition ; 10,000,000 (50 per cent) have enough defective teeth to interfere seriously with health ; at least 2,000,000 (10 per cent) suffer from obstructed breathing due to enlarged tonsils ; probably 2,000,000 (10 per cent) have enlarged cervical glands which need attention, many of these being tuberculous ; at least 10,000,000 (50 per cent) are, or have been, infected with tuberculosis, of whom about 2,000,000 (10 per cent) will later succumb to the disease ; 4,000,000 (20 per cent) have defective vision ; over

[1] Terman, Hygiene of the School Child, p. 8. Houghton Mifflin Company.

1,000,000 (5 per cent) have defective hearing; about 1,000,000 (5 per cent) have spinal curvature or some other deformity likely to interfere with health; not far from 500,000 (2½ per cent) have organic heart disease; and at least 1,000,000 (5 per cent) are predisposed to some form of serious nervous disorder.

Medical inspectors. Medical inspection is now quite general but is still occasionally provided by the health authorities, charitable agencies, or individual initiative. It should be and most commonly is regarded as a responsibility of the school board and one hardly less important than instruction and equipment. Large cities should undoubtedly have specialists in this particular work employed on full time. Smaller cities should have competent physicians or nurses to devote specified time to this duty. A few rural counties have led the way in the employment of experienced experts to have entire charge of the inspection and supervision of the sanitary condition of the schools and physical condition of the pupils. Where even a part of the time of an expert cannot be regularly employed, there can usually be found a public-spirited physician or one who desires to extend his practice who will make at least one routine inspection annually without any charge whatever. Such enlightened self-sacrifice usually profits a physician far more than it costs him.

Dental inspection. Dental inspection is commonly and properly made quite distinct from the general medical inspection. In smaller communities local dentists are frequently willing to make necessary dental inspections and reports free of all charge. It is dignified and professional, but none the less effective, advertising. One hundred and nine cities of the United States had regular dental clinics, free at least to those unable to pay, in the year 1914. Most conspicuous among these is the two million dollar Forsyth Dental Infirmary for Children presented to the city of Boston. A rapidly growing appreciation of the serious

effects of bad teeth upon general health and efficiency should prompt every community to provide some adequate treatment for those too poor to provide for themselves. Such care may well be classed in the category of educational necessities which are the right of every child along with free instruction and free books.

Dr. William H. Potter thus summarizes the school's responsibility with reference to children's teeth:[1]

1. In all public schools there should be careful instruction given as to the nature of the teeth; their uses; the diseases which attack them; and the methods for preventing or diminishing these diseases. Children and their parents should be taught that the cleaning of the teeth and their thorough use upon hard foods will much reduce and perhaps prevent decay. School teachers must assume an oversight in regard to their pupils' teeth.

2. Examinations of the teeth on all school children should be made at least twice a year.

3. Establish in school buildings school dental clinics in charge of dentists paid by the municipality. Add the services of a dental nurse, if the law makes them possible. These school clinics are to serve only those unable to consult a private dentist. A small fee should be charged in every case if possible.

4. Begin work upon school children before serious decay has occurred in their permanent teeth, and continue the supervision and necessary repair work through the twelfth year.

Examination by specialists. Specialists in the eye, ear, nose, and throat likewise serve themselves as well as the community when they accept an invitation to make free inspection at least of such children as may be specially referred to them by the medical inspector or the teacher. In one town, where adenoids were particularly prevalent, such an inspection was made by a specialist from a neighboring city with the result that a series of "adenoid parties" were held. The

[1] United States Bureau of Education *Bulletin No. 18*, 1913.

specialist made a low rate for the operation and funds were raised by subscription for the few who could not afford to pay. Reliable opticians who advertise free examination can readily be persuaded to make their examinations at the school.

School nurses. The utilizing of volunteer or part-time inspectors, however, has certain disadvantages and is probably not as effective as the regular employment of a full-time nurse. Medical Director Foster of Oakland, California, has this to say in the way of comparison :[1]

When the mooted question of doctors on part time or nurses on full time came up, I favored the latter to do the routine work, but under strict medical supervision, and six years' experience with nurse help has strongly convinced me that we made no mistake. It is a matter of true economy, for the nurse's full time can be had for the same pay as the doctor's two or three hours. They will do, hour for hour, as much work and do the required work equally well. They are patient, painstaking, and persistent. They do not stir up antagonisms and jealousies as does the average doctor, for he will be accused, even if unjustly, of working for his own betterment. . . . The nurse will meet resistance and abuse with more tact and will overcome objections where the ordinary doctor will fail. The objection that the nurse cannot properly diagnose has no force. She can tell a decayed tooth or enlarged tonsil, defective vision or granulated lids. She may not be able to tell the exact defect of vision ; neither can many doctors. What should be done with certain diseased conditions, she may not know ; any half dozen doctors, taken at random, might have that number of different opinions. What is required is to find the defect, if it exists, and refer it to the family doctor or specialist for a definite diagnosis and treatment, then follow up the case and see that the work is done.

The school nurse is probably the best solution of the problem of physical inspection and supervision. She is on

[1] *Proceedings of Eighth Congress of American School Hygiene Association*, p. 26.

duty constantly or makes daily visits according to the size of the school. She is provided with clinic thermometer, simple remedies, and first-aid equipment and should have a cot ready in a quiet room for the occasional emergency. To her the teachers refer every case of indisposition. She should be competent to determine between the real and the imagined or pretended. She should attend to the injuries and slight ailments incident to a large group of children. More serious cases she refers promptly to parents or physicians. She should be particularly trained to recognize the first symptoms of contagious diseases. She should make systematic medical inspections including eye and ear tests. She should visit the classrooms and have an especial care for hygienic and sanitary conditions. She should have an oversight of the defective, feeble, or nervous children at their work and see that their special needs are provided for. She should have general inspectorial and supervisory authority in all matters of hygiene and sanitation regarding the school and maintain the standards of school housekeeping. She should visit the homes and advise with parents regarding any questions of the children's physical welfare — medical treatment, food, exercise, sleep, light for study, or cleanliness. She should hold mothers' meetings and should follow up all recommendations made in the physical inspections.

Teacher as medical inspector. But where neither nurse nor other medical inspector is provided, and this still includes a large proportion of the children of America, it is incumbent upon the teacher to perform as many of their functions as possible. Any teacher may easily familiarize himself with the symptoms of such common affections as adenoids, enlarged tonsils, anæmia, hookworm, nervous disorders, and troubles of the eye, ear, or throat. It does not require experience or expert knowledge to select those children who should be recommended for expert examination.

Eye tests. One can quickly learn to use the Snellen Test Cards for defective vision. These are usually supplied to schools without cost by the local or state health authorities, or they may be purchased for a few cents. Simple directions come with the cards. It may be well to say that care must be taken to avoid having the children become familiar with the cards beforehand or while others are being tested, in which case memory instead of vision might be tested. It is necessary also to avoid pressure on the ball of one eye by holding the hand against it while the other is being tested; also to keep the cards clean and bright and to have the light shine squarely upon the card and not into the eyes during the test. Carelessness in these simple details sometimes begets confusing results and destroys confidence in the tests.

Hearing tests. The simpler hearing tests are so affected by varying conditions that they are not satisfactory for school use. The "whisper test" may be useful after considerable practice. The audiometer is too elaborate an instrument to be used except for very thoroughgoing examinations. The best practical test is a teacher sufficiently sympathetic to recognize the difference between deafness and dullness. If, while the children are attentive to their studies, something is said to a child in a low tone which those sitting near him hear and he does not, there is some indication that his hearing is defective. Repeated tests of this kind would be fairly conclusive, allowance being made for the possibility that greater concentration on the study accounts for the results. Deafness of one ear is readily tested by closing the other.

Health records. Whoever makes the medical inspection, a complete card-index record should be kept of the physical history of every child. Compact forms for these records have been prepared by various health authorities, are published

in the several works on medical inspection of schools, and have to some extent been standardized and put on the market by dealers. The forms provide for a full inspection record, attendance summary, vital statistics, and health record for the entire school life of the child.

Reports. A report of the findings should be sent to the parents at any time that it is believed further medical examination or treatment may be necessary. Caution is necessary, however, to avoid hasty and unreliable reports. Parents should not be unduly alarmed or antagonized. A teacher inexperienced in diagnosis and looking for symptoms will probably find enough of them to arouse a panic if parents take the reports seriously. Even expert inspections have frequently proved hopelessly unreliable and contradictory when followed up. Inspections, certainly those by teachers, may best be confined to the more evident defects or those which affect school progress directly and should be several times repeated lest parents be disturbed by unfounded guesses and the inspecting be brought into contempt. A printed form is a rather unsympathetic means of telling a parent that his child is suffering from a defect or disease. Any case of the kind is worthy of a sympathetic, interested personal note from the teacher or nurse. Even then ignorant parents and those unaccustomed to such oversight of their children are likely to be alarmed or offended. To accomplish any actual results in the physical improvement of the children, it is necessary to have a sympathetic touch with the parents and to follow up the recommendations with inquiries and probably personal visits and consultations.

Special consideration of defectives. Special consideration should always be extended to the child afflicted with any defect, yet the truly considerate teacher will avoid calling attention to it or making the unfortunate one more conscious of his trouble than necessary. The sufferer from

weak vision will be seated in the best light. The one hard of hearing will be seated near the teacher, and it is an act of kindness to him not to speak very loud when addressing him but to look directly at him and to articulate distinctly. Any partially deaf person will bear witness that being shouted at is painfully embarrassing and is little or no aid to hearing. The nervous child should by all means be allowed frequent opportunity for change of position and of occupation. The frail ones should be given lighter tasks, shorter hours, and occasional complete rest. Cushions, foot-rests, and other means of relieving physical strain should not be denied to any child who does not abuse the privilege of using them. They may well be as large a factor in relieving fatigue and increasing efficiency for a frail child subjected to the harsh conditions of school as for his parents in the home or in the office.

Instruction the higher purpose. However effective the inspection and reporting, however close the touch with parents, and however thorough the follow-up, the large opportunity for the teacher is in making use of these occasions for effective instruction in physiology and hygiene. The golden time for instruction in oral hygiene is when a dental inspection has brought home to every child the need for constant care of the teeth. Instruction in the care of the eyes can never be so effective as when some of the class have just been referred to an oculist for treatment. Private conferences and advice to individuals may well supplement such of the opportune instruction as would be permissible with the whole class. The occasion may be suitable for certain instruction in sexual problems to the boys and girls separately.

The following, taken from the source quoted above in regard to school nurses, is an effective statement of this important matter:

The personality of the workers is of utmost importance. It may be needless to say that they must be deeply interested in their work and imbued with a true missionary spirit. They must love children and be diplomatic, patient, tactful, and persistent. They cannot attain the best success if their aim is merely to build up statistics of examinations made or operations performed. The removal of defects is one object and the one visible to the general public, but it is subordinate to the educational. I do not underrate repair work, but it is a means to the end. Every successful operation is an object lesson to all who know the child, but could we remove all defects by the turning of the hand the next generation would be as bad. The real problem is prevention. The curing of defects without showing the way of prevention is like bailing a leaky boat, a never-ending task.

Competition in health training. The following from the Peninsula School Fair Catalogue (Williamsburg, Virginia) indicates one means of keeping health instruction vividly before the children and fixing instruction into habit. This also secures much valuable data which could hardly be secured or tabulated otherwise.

School contest in composition. Three prizes of five dollars each will be awarded, one to the school of each class exhibiting the best series of papers on "Malaria" bound together as a connected book on the subject.

This should be the work of as many pupils of the school as practicable working in groups or individually. Assistance should be drawn from every source possible except in the actual composing and preparing of the papers and book, which must be done by the pupils themselves.

The following topics are suggested for the several papers of the book: History of Malaria; Its Cost in Time, Money, Energy, and Life; Nature and Treatment of the Disease; Cause of Malaria; Life History of the Malaria Mosquito; Prevention and Final Eradication; Community Survey of Malaria Cases, of Breeding Places for Mosquitoes, and of efforts, especially of the school itself, to prevent malaria.

Health and attendance contest. A prize of ten dollars will be awarded to the ungraded school or to the room in a graded school making the best record and report of health and attendance for one hundred and twenty school days, from about October 1 to about April 2, on the following plan:

The pupils of any room entering this contest shall each month or oftener elect one or more of their number to keep faithfully the required record every day. The record should be made in the morning and corrected for the day in the afternoon. Absences for unknown cause must be inquired into and recorded accurately as soon as possible. No guess or hearsay is permissible in this record.

When the actual count for the 120 successive school days is ready, the report is to be carefully made out as follows:

1. Show the totals recorded under each head given below for the whole time.
2. Multiply each total by the penalty number shown in parenthesis after that head.
3. Find the sum of all these products.
4. Divide this sum by the number of pupils enrolled.
5. This quotient is the "health-attendance index," and the room making the lowest index number on an approved report will be awarded the prize in this contest.

Items to be Recorded

1. Number of pupils sitting in wet shoes . . . . . (5)
2. Number not having or not using handkerchief when needed . (3)
3. Number failing to brush teeth before coming to school . . . (3)
4. Number having toothache . . . . . (3)
5. Number having headache . . . . . (4)
6. Number having cough or cold in the head . . . . . (4)
7. Number regularly breathing through mouth (usually means adenoids) . . . . . (2)
8. Number having sore throat . . . . . (4)
9. Number with sores or eruptions on face or hands. (Do not count cuts or bruises unless they are infected and become running sores) . . . . . (4)
10. Number present and ill otherwise than as above . . . . . (3)
11. Number absent because ill with diphtheria . . . . . (5)

12. Number absent because ill with scarlet fever . . . . . (5)
13. Number absent because ill with whooping cough . . . . . (5)
14. Number absent because ill with mumps . . . . . (5)
15. Number absent because ill with any other contagious disease . (4)
16. Number absent because ill with typhoid fever . . . . . (5)
17. Number absent because ill with malarial fever . . . . . (4)
18. Number absent because ill with any other disease or illness . (4)
19. Number absent because quarantined to protect school . . . (1)
20. Number absent because of fear of contagion at school . . . (5)
21. Number absent because needed to help at home . . . . . (1)
22. Number absent because of any other important reason . . . (2)
23. Number absent because of lack of interest, misconduct, or trivial reason not approved by teacher . . . . . (5)

The teacher must certify that the record has been faithfully and accurately kept by the pupils. The superintendent will check up these reports as far as practicable and throw out any which are found to be unreliable.

The health ideal. At all times let us bear in mind that the school's responsibility and interest is for health, not disease; that we have health inspections, not disease inspections; that instruction should be of health and cleanliness, not of sickness and dirt. People who exercise, energize, and Fletcherize; who love fresh air, sunshine, and cleanliness; who are cheerful, careful, and busy, — such people are healthy, happy, and hearty. These are the thoughts to keep before the pupils. Dwelling on the unwholesome tends to make children morbid. Rather keep them thinking of the joys of being sound, the glorious luxury of keeping clean, the fun of being vigorous and energetic, and you contribute most effectively to making them so. There is every reason why school life should be the most wholesome life for teacher and pupil, why school should be the safest and happiest place for all to be, why eyes and lungs and nerves and backs and digestions and tempers should be better there than anywhere else. Let us keep our minds on this ideal and make it true.

PROBLEMS

1. Counting the average cost of a year's schooling at $30 per child and the loss of efficiency due to any one of the defects mentioned in the estimate quoted from Terman at ten per cent, how much of the money spent for schools in the United States is wasted because of these defects?

2. Supposing health supervision would save fifty per cent of the loss in school work due to these causes, how much would the schools be justified in expending for the supervision on the ground of economy alone?

3. If the medical inspection and supervision of your schools is not already adequate, make plans and estimate costs of making it so.

4. Compare several forms of medical inspection record cards and prepare a form which you think includes the best features of them all.

5. After preparing yourself carefully for the task, it would be well to make a few practice examinations of the eyes, ears, and general physical conditions among your pupils or fellow students. If possible, compare your results with the official medical inspection records for the same persons.

6. If a nurse is not already provided, make practicable plans for the employment and for the duties of a school nurse for your school.

7. With the aid of necessary works on physiology and medical inspection, prepare a list of the most common physical defects among school children and the symptoms of each.

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CHAPTER XI

THE COURSE OF STUDY

Early courses. As early as 1528 the Electorate of Saxony had adopted a graded plan of studies prepared by Melanchthon, Luther's learned associate, for a uniform state system of schools. It provided for three grades of uncertain length as to time but of extensive content. For example, the first grade or class was taught reading and writing (of Latin) from a primer prepared by Melanchthon himself, the Creed, the Lord's Prayer, the Commandments, and several prescribed classical selections. From this plan the national school system idea of modern times has grown.

In 1599 the Jesuits adopted their famous *Ratio Studiorum*, the finished product of sixty years of experience and critical study of their plans of education. With a single revision in 1832, it has been followed continuously in their schools. In it the studies and daily routine of life of pupils and teachers are detailed at length.

State and city tendencies. Almost every theorist and organizer of schools has outlined in some form his conception of the selection of human wisdom that should be taught to the rising generation. With the development of state and national systems of schools these selected courses have taken on an official character and have tended to become formal and prescriptive. The democratic origin of the American state systems has prevented a high degree of centralization, and we find the various state departments of education publishing courses of study ranging all the way from the barest statements of subjects to be taught

or texts required to be used, to quite valuable manuals of elementary methods. The lack of any highly centralized organization or sufficient corps of inspectors to enforce a detailed course of study, such as are found in France and Germany, has caused our state courses to be suggestive rather than prescriptive. The city systems, however, having usually a close-knit and competent organization, have frequently run to the extremes of prescribed detail. The common criticism has been that they have destroyed the initiative and dampened the spontaneity and enthusiasm of teachers. Too much prescription has been usual in the cities, where teachers are better paid and able to act independently, and little or no guidance in the country, where salaries are low and teachers are inexperienced.

In form, the course of study is essentially a statement of the work to be covered by the school. It is usually divided to show the assignment for each term, occasionally for each month or week, and, in extreme cases, it dictates the material for each lesson. It is said that a French National Minister of Education once boasted that he could look at his watch and tell exactly what every child in the public schools of France was doing at the moment.

Types of courses. The traditional mechanical course makes its assignments in terms of "page limits" in the prescribed textbooks in each subject. Such an outline has no value except to count time for the "lock step" into which it is intended to force the progress of the pupil. A common result is to have the pupils marking time some days and crowding over longer assignments than they can possibly digest at others. "We have to get over the ground" is perhaps the commonest excuse for all the sins of inefficient teachers; as though covering ground were in any sense a function of the school. Better courses are outlined in topics, with or without page references to specific

texts. But these also do little more than to indicate the ground to be covered or, at least, are so interpreted by the teachers. As the ground or scope of subject matter to be covered is taken from the experience of the best teachers and schools, it may be taken for granted that it is always a little more than the average teacher and school can do well. The effect almost universally is that the course of study is an excuse for wasteful haste.

Still other courses prescribe in more or less detail the methods to be used in teaching the several topics. These commonly reflect the bias or hobby of the course-maker. The weaker teachers direct their efforts and professional development toward attaining the idiosyncrasies of the outline. The stronger ones are hampered in their initiative by the feeling that they will be judged by their approximation to the directions given rather than by their efficiency in child development.

The time-limit fallacy. Much work has been done in the way of investigating how much time or what proportion of the time in various schools is devoted to each of the studies. The function of such data is to indicate what has been done, not what ought to be. The conclusions from such studies would tend to show that the time factor has little or nothing to do with the results attained. In fact, the best educative results are attained, if conditions of organization permit, when the divisions of the pupils' work into subjects is largely lost in the correlations and concentrations of better teaching. What could be of less concern in a course of study than the question of how much time daily or weekly shall be given to the recitation of any particular subject? Even the most stupid supervision of factory hands would recognize that one should continue at a particular task until it is done and that one should not keep on doing it after it is done. In the nature of things different pupils do not require the same

amount of time to do the same task, much less do they need the same time at a given sort of exercise to secure the same developmental results.

In any grade the pupils should practice writing in proportion to their need for that training. When one has attained a certain proficiency as a penman the work is done, and he no longer has any business in a writing class. When one has got from his arithmetic study the abilities for which it was intended, why should he continue at it? To set five hours a week for a pupil to do what he can do in three is only a little worse than limiting another of less ability to five hours to do that which will require him eight. Obviously it should not be a function of the course of study to prescribe the time to be devoted to study tasks.

Shifting bases of course of study. Any course of study is a selection from the whole inheritance of human achievement, chosen and arranged by the authorities according to supposed values and adaptability for preparing the child for life. Few authorities, however, have a sufficient mastery of that human achievement to enable them to choose unerringly, and they are by no means agreed on the basis of selection or the grounds of adaptability. Wherefore mere tradition has usually been the dominant factor in determining the content of our courses of study. If the ideal course were some definite thing, we might ultimately attain it by a conservative evolution, but the choice of a course rests directly upon four fundamental bases, each of which is itself a changing one:

(1) Changing knowledge of the child's nature and capacities; (2) changing knowledge of the effects which different activities and studies have upon that nature and those capacities; (3) a swiftly changing body of human knowledge and experience available for educative purposes; (4) changing ideals of what constitutes a well-educated man.

In each of these respects the changes have been so decided within the past few years that no merely traditional curriculum can be justified. National and community ideals, prospective occupations of the majority of the pupils, the teaching force, the equipment and length of term, are some of the other factors which necessitate changes in curriculum from place to place, as well as from time to time.

True functions of the course. For such reasons no course of study can be regarded as permanent or as ideal. What it should seek to do is not to set limits to the teacher's activity nor prescribe the exact lines of class progress, but, like other forms of supervision, to set up ideals, to fix minimum standards, to clarify aims, and to afford as much as possible of practical aid and suggestion. The functions of a useful course of study may be summarized thus:

1. *Clarify the teaching aims* at each stage of the child's advancement and in every subject of study required. These aims should be in terms of the *pupil's abilities* which are to be established.

2. Indicate *the sort of pupil-activity* which is essential in order that these particular abilities may be developed.

3. Indicate the *lesson materials or subject matter* available in the prescribed texts, supplementary books, reference works, apparatus, and natural and social environment, through the use of which the necessary pupil-activity may conveniently and profitably be stimulated.

4. *Suggest the methods and motivation* particularly adapted to securing the necessary pupil-activity most economically and effectively, with references and other helps for the teacher's guidance.

5. Suggest practical tests of the abilities sought, by which a teacher may *know positively that the results have been attained* and may demonstrate these results to supervisors or parents and to the pupils themselves.

Its adaptability. Such a course of study should be and by its very organization will be readily adaptable to (1) varying conditions of school organization; (2) varying length of term, equipment, and resources; (3) varying methods, preparation, and abilities of teachers; (4) varying local interests, ideals, and environment; (5) varying individual capacities of pupils.

The grade teacher does not make the course of study and is not likely to be provided with an ideal course — if indeed the ideal could be reduced to print. Our purpose here, then, is not to advise as to the making of the course but to indicate what it is that the teacher should look for in the one that is provided.

Teacher's use of the course. Whatever be its form, such ideas as these must govern the teacher's interpretation of his course of study before he is really prepared to make intelligent use of it. We may repeat the points given above in the form of questions which the teacher should put before himself in preparing to use any section of the course assigned.

1. What particular part does this assignment have in the education of the children? What useful habit or skill is it intended to establish? What ideals, attitudes, ambitions, is it supposed to arouse? What knowledge is to be imparted for future use and in what connections or with what degrees of vividness should it be established in order to function effectively in the use expected of it?

2. If we recognize that all educative growth of whatever sort results only from activity of the pupil, what kind of pupil-activity is essential to get the particular pupil-development expected of this assignment?

3. What text lesson has been provided by the authors or prescribed by the supervisory authorities or is otherwise accessible for the economical and effective stimulation of pupils

to the particular educative activity desired? Ordinarily this is the one function which the courses as provided do accomplish and from this one clue the teacher must determine the rest.

4. With the books and equipment as our materials and the required pupil-activity as our aim, what teaching device, methods, motivation, class exercise, or other activity of the teacher is best for getting the desired results?

5. How may one know when the result has been attained? when to continue the process? when to discontinue? when to vary? What thing can a pupil do, or what will he do or want to do and try to do, when that definite educative result has been accomplished that he could not or would not do before? How may this be demonstrated to parents and pupils to win their appreciation and coöperation in connection with subsequent assignments or in promotions and retardations?

6. When these fundamental questions have been decided, just how must they be varied for the particular conditions and community environments in which one is teaching at the time? How may local situations and resources be utilized for motivation? What correlations and concentrations of the subjects and topics are made desirable by the local conditions or by the peculiar interests and experiences of pupils or of the teacher? What variations should be made for exceptional individuals? In short, every pedagogical consideration is binding upon the teacher, regardless of the course of study. Its intent is to fulfill and not to defeat the principles of good teaching.

The measure of good teaching. It will be objected that such an analysis of the usual course is beyond the capacity of the ordinary teacher. From this objection we may reach three conclusions: first, that we should not have the usual course; and second, that we should not have ordinary teachers; and third, that whatever the character of the

course or of the teachers, their educative value to the children is in direct proportion to the clearness with which the teacher has analyzed the task assigned in just this manner. Whether the printed outline has merely set page limits or has been constructively helpful, the teacher can follow it and *teach* only by knowing the abilities or educative results sought for, the pupil-activity necessary to attain such results, the way by which the lesson material may be used to bring about the activity intended, and by knowing when the thing to be done has been done. Vaguely and indefinitely, at least, every teacher *is* conscious of just these things; but if this consciousness is vague and indefinite so, likewise, are the results of his teaching. A more adequate analysis along the lines indicated will mean more adequate results.

The cause of bad teaching. Countless teachers have taught arithmetic under a vague impression or perhaps a specific authoritative statement that the teaching of arithmetic to a pupil trains him to reason and prepares him for the business of life, when it was easily demonstrable that the reasoning habits resulting from that arithmetic teaching were positively pernicious and as preparation for business it was worthless. This may have been due to the fact that the pupil was required to "think about" combinations which should have been drilled into mechanical, unthinking response, or that he was "drilled to an automatic proficiency" on analyses and principles in which the maximum of attention — the very opposite of automatic response — is essential. This illustration could be paralleled in every subject taught in the school and is typical of just what makes bad teaching bad.

The first step in the betterment of the work of any teacher is to let him into the secret of what it is he is trying to do. The next is to disclose the same esoterics to the pupil. Whatever can be done to guide or even to

force the teacher to thinking on these things is just so much toward making bad teaching good. The poorer the teacher the more imperative such thinking is. Be it well done or poorly, it is the measure of the excellence of his teaching. At the very least it keeps a teacher growing instead of petrifying.

PROBLEMS

1. Compare several courses of study with reference to their relative helpfulness. What are the features which contribute most to this helpfulness?

2. Which features would tend to lessen the teacher's initiative? Which would impose useless restrictions as to rate of progress? Which indicate assignments in terms of development of pupils? Which in terms of topics? Which in page limits?

3. Classify the courses as (1) information or knowledge courses, (2) development courses (Cubberly).

4. Compare the courses with reference to the content prescribed. What provision is made for the special needs of the city, county, or state for which it is prepared? What provision for different schools and localities within the area in which it is used? What opportunity or aid is given the teacher for adapting his teaching to local needs and temporary circumstances? How can it be adapted to the needs of pupils of differing abilities?

5. Compare a recent course with one twenty or more years old. What difference do you note in the content provided? What difference in educative aim seems to be involved?

6. Compare, in the same manner, a course for rural schools with one for city schools.

7. Interpret according to the questions under "Teacher's use of the course" as given in this chapter, the work assigned for some particular grade in a particular course.

8. Can you discover instances in which pupils have passed "through" or "over" subjects or grades but do not give evidence of having gotten the sort of development that the course-makers intended the subject or grade to accomplish?

READINGS

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CHAPTER XII

ORGANIZATION OF THE SCHOOL

Origin of class instruction. John Sturm at Strassburg in 1538 introduced the time element into his course of study. Melanchthon's course had designated the things to be learned and the order of their being taken up, but it assumed that a pupil would continue upon a given assignment until it was learned and no longer. Sturm sought to make the product of two constants, the time and the texts, and two variables, the teacher and the pupil, produce a constant educative result. Great as have been the advantages of the grade organization of schools, to which Sturm was thus an important contributor, this fallacy has been hard to live down.

At his time lectures were delivered in the universities to large audiences, but grading was not thought of except in the final examination of candidates for degrees. For nearly three centuries after the time of Sturm the actual teaching and reciting of lessons was still a purely individual matter in nearly all schools. Comenius (1592–1670) advocated class instruction and with keen insight pointed out its advantages and indicated the method. But this was in his "Didactica Magna," a work which was very little known until well into the last century. Jean Baptiste La Salle, about 1695, wrote the "Conduct of the Christian Schools" as a detailed guide for the Brethren of the Christian Schools, a Catholic order devoted to primary charity education. In this work he expounded the method of class teaching in great detail and may well be called the inventor of class instruction.

But the real impetus to class organization was given at the close of the eighteenth century when Joseph Lancaster, simultaneously with Dr. Bell, developed among the poor children of London a scheme whereby one teacher could teach as many as a thousand children at a time. This was the "monitorial system," and it consisted in organizing the children like an army and promulgating lessons through a series of monitors as a general would issue commands through his officers. This was widely hailed as a marvelous solution of the problem of universal education which the recent social revolutions had then made prominent in the dreams of statesmen. In time it was discovered, as was neatly said, that it was a means whereby at next to no cost at all a community could secure next to no education at all. But before the reaction took place the plan had been widely introduced and the right of all children to an education was recognized. It was gradually superseded in England by the Dutch plan of pupil-teachers, which made permanent apprentice teachers of certain older pupils, and in this country by the organization of large schools on the annual grade plan.

The trend to the mechanical. During the nineteenth century the tendency in American cities was toward elaborate mechanical organization. Rigid courses of study, lock-step methods of teaching, inelastic methods of marking and grading, and promotions by rule and per cents had well-nigh eclipsed consideration of the individual pupil. Red tape and routine were rampant. Smaller towns imitated big ones with their forms, blanks, regulations, and systems; and only in the country schools of one teacher with no professional knowledge, and little academic, did much teaching of individuals survive.

Ungraded schools. Seeley has summarized the advantages of an ungraded or "mixed" school as follows: (1) The child learns to be self-reliant. (2) It encourages individual

work. (3) It furnishes an opportunity for children to learn from the recitations of higher classes. (4) There are not so many outside distractions for the country child. (5) Country school affords opportunity to study nature at first hand. (6) It trains to responsibility. So far as the work in the school is concerned it would seem that the third of these arguments largely contradicts the fourth. The three last mentioned are advantages of country life rather than of an ungraded condition of the schools. More effective teaching rather than the mere fact of lack of organization in the school should attain all the advantages mentioned.

Values of grading. Ungraded public schools are such solely because of a lack of pupils, equipment, supervision, or teaching force to make grading practicable. Wherever possible these ungraded schools are being consolidated into central graded schools. That they should have been defended at all means simply that the organization of the larger schools has done some things that should have been left undone. There is no good thing in education which can be done with small means which should not be better done with means more adequate. If a good thing is lost in larger organization, the conditions and not the fact of the organization should be attacked.

The advantages sought in the organization of schools were the following:

1. Economy in plant and equipment and more especially in the teaching force, making universal education possible.

2. Specialization in the work of the teacher, thus securing higher special preparation, concentration on fewer problems, expert ability developing through experience in a narrower field, and greater economy of effort and refinement of methods.

3. Standardization of courses of study, textbooks, equipment, and supervision.

4. Social and intellectual values of having pupils work in homogeneous groups. The stimulation of competition with one's peers, or the "speeding-up" of factory parlance.

Factory organization or craftsmanship? In short, the advantages are precisely those obtained by organization in any large industry, — uniformity, economy, and efficiency through specialization and system. But the limitation of values in these factory methods when applied to schools arises from the fact that children are not inert materials to be manufactured into a uniform product. With materials never identical and with laborers in the educational factory working through their own diverse personalities and multiform spiritual processes instead of through uniform machines, the products must necessarily be individual; the task, that of a craftsman rather than of a factory operative. The effect of organization upon factory workers is to make them like their machines, — blindly obedient, unthinking, doing automatically and without variation that which the systematizing head has predetermined. Supervision of craftsmen would seek rather to suggest, stimulate, inspire; to free the worker of needless routine, to keep him in the best spirit for his work, to hold up high ideals, to criticize constructively, to keep individuality sacred.

A hard problem of supervision is to make craftsmanship organization effective when only factory-hand laborers are available. It is the problem of fitting ideal policies to actual conditions. The proportion of professionally trained teachers is yet small, and even the graduates of short normal courses are lacking in academic breadth and cultural ideals. The majority appear to be dependent on detailed methods and rule-of-thumb directions. However, since the perfunctory operatives cannot make good teachers, whatever the supervision, factory organization should not be allowed to destroy the initiative of the true craftsmen nor the growth of those promising ones who may become such.

Eight and four or six and six. It is usual in America to organize the public schools above the kindergarten into four primary grades and four grammar grades, these eight years (occasionally seven or nine) constituting the elementary school, and four years more known as high school or secondary instruction. Completion of these grades, with certain restrictions as to work covered, will admit to most American colleges. Of late there has been much advocacy and increasing development of the "six and six" plan, in which there are six years of elementary work and six of high school, the latter six divided into three years of "junior" and three years of "senior" high school. Reasons for this change given by United States Commissioner Claxton are the following: the transition to high-school methods corresponds more closely with the beginning of adolescence or the change from childhood to youth; the present course is weakest in the seventh and eighth grades; the beginning year of the junior high school will be the best place to begin departmental instruction; the expansion of the work of the secondary schools in languages and mathematics will result in a considerable gain in time and will approximate the standards of European schools; a further differentiation of the courses in the senior high schools is practicable; the beginning of high school work just at the end of the compulsory period has confirmed an idea that only elementary education is needed; it better solves the problem of housing the classes.

Departmental teaching. In departmental teaching a teacher is assigned to one or more subjects in several grades, instead of being assigned to entire charge of all subjects in a single grade. It assumes that a teacher should be primarily a specialist in the content and method of the subjects he teaches. The other plan regards him rather as a specialist in children of the age he is teaching and the

subject matter as presumed in his preparation. In the primary grades certainly the teacher is first of all *in loco matris*, and subject specialization would be absurd. In college and high-school teaching the pupil has less need of parental oversight, while the subjects are sufficiently advanced to require a specialist to teach them effectively. Just when the ideal point of transition is reached has been long in question. As indicated above, the sixth grade is perhaps the best place for this change. In every grade every pupil should have some one teacher to whom he looks for advice and guidance, someone who is interested in him personally and who is responsible for his conduct in the same degree that a grade teacher is for the children of his grade. Every high-school group should have some member of the teaching corps as advisory teacher who will keep their records, supervise their study periods, and have general charge of them except in the teaching of lessons assigned to other teachers. No child should be at school without feeling that someone is *his own* teacher. This feeling of mutual interest and confidence may be increased by keeping the same teacher in charge of a given group throughout their entire high-school course. Where this close personal relation is made permanent, however, some element of personal choice on the part of teacher or pupil should enter into the selection of advisers for the groups.

Aims of modern organization. Modern school organization, which seeks to get away from mere mechanism and to make teaching vital, develops rather than directs its teachers. It suggests, sets ideals, fixes aims and standards, inspires, and then it holds the teacher rigidly responsible for results in terms of real capacities developed in the children. It keeps the teachers studying the individual pupils, keeps them diagnosing individual defects and seeking causes and remedies; keeps them appreciating superior abilities and

developing them to the utmost; it prevents them hiding in cowardly formality behind chance percentages in arbitrary examinations. It makes the teacher conscious that he cannot blandly wash his hands of responsibility for a pupil by merely marking him "failed," but that it is the teacher who fails if he does not make the most of whatever possibilities there may be in a given child. Fifty per cent on grammar and high standing in constructiveness, determination, and practical usefulness is no more "failure" than one hundred per cent on grammar and half efficiency in the other attainments. Educational tradition has reduced but a few forms of mental and moral attainment to lessons, textbooks, and examination grades. Modern organization is seeking to free these from the shackles of tradition and bring many others to due recognition. It also regards the teacher's health, happiness, and enthusiasm as teaching values worthy of monetary investment, and it counts friction and discouragement as waste no less real than financial loss. It uses formality and routine as labor-saving devices in the field of external nonessentials, but makes the heart of teaching something more spiritual than mere courses, methods, systems, and facts.

Indictment of the mechanical systems. The indictment of the mere mechanical organization that has become traditional may be summed up: It is based on the false assumption that all children can or should advance at a uniform rate, that they can be assorted into grades of homogeneous capacities and separated grade from grade by fixed and uniform intervals. At the end of a session, work below an arbitrary standard of attainment, as determined by notoriously defective measurements, is rejected as "failure" and counted as nothing, regardless of the actual development of the pupil. The pupil is required to repeat the work of the term in precisely the same manner that he went over it

before, insuring that the defects of the previous term will be repeated in the second in the same manner and for the same reason. He becomes discouraged and paralyzed with his sense of failure; or he becomes resentful, ascribing his defeat to the injustice of teachers or the good fortune of his quicker-minded fellow pupils; he loses interest and ambition, which are the only forces by which he can progress; he turns to idleness and mischief, thus insuring a second failure, and the second failure almost inevitably leads to early elimination from the school altogether — the worst failure of which any school system can be guilty. To avoid this ruinous and humiliating disgrace of "failure," sensitive children often break down in health from overstudy and anxiety. Meanwhile other children show the prescribed attainment with very little educative effort, development, or character building. Having much time unemployed in study, this abler group discharges an enormous amount of energy into the usual occupations of idle hands. For lack of effort they soon acquire habits of inattention and mischief and of working far below their maximum capacity — which last is the surest guarantee of ultimate worthlessness. Ambition to advance beyond the slower members of the class is thwarted by impassable gaps between the ambitious child and the next grade above. There is no provision made for him to bridge the gap, and if he jumps it, his preparation is defective for much of the work in the grades above.

Such a system fosters impersonal, routine teaching and promoting. The work becomes a monotonous grind; the grade, a Procrustean bed. It reduces subjects and parts of subjects to a dead level and discourages originality and initiative in pupil or teacher. It suppresses genius and ambition and makes supervision mechanical and arbitrary. The social values possible to a class recitation are destroyed by the rigidity of the grouping.

Does grading grade? How utterly the formal grading systems fail to do the very thing they purport to do — sort the children according to their mental capacity — is shown by numerous scientific tests made within the past decade. Tests of the "Reasoning Ability of Children of the 4th, 5th, and 6th Grades," made by Dr. Bonser in 1910, showed that 90 per cent of the 4 A pupils tested were superior to the poorest of the 5 A pupils, and that 79 per cent of them were better than the poorest of the 6 A pupils. The same results showed 15 per cent of the pupils of this grade to be better than the middle pupil of the 5 A grade, and 5 per cent of them to be better than the middle pupil of the 6 A grade. Thorndike concludes that "the result of actual school grading is to pick the most able for the highest grade hardly four times in ten." The fundamental abilities in arithmetic are usually regarded as the chief basis of grading, yet the Courtis tests in just these abilities show that there will be found in any fourth grade, pupils whose ability is equal to that of the average pupil of the seventh grade or to that of more than a fourth of the eighth-grade pupils; and that there will be found in the eighth grade, pupils whose ability in these arithmetic fundamentals is below the average ability in the fifth grade or that of a third of the pupils in the fourth grade. These results are taken from thousands of classes in the best cities and schools of the country, and will be found typical almost everywhere, regardless of rigidity of grading.

Semiannual grades. The first step toward relieving the overmechanizing of city school systems was the introduction of semiannual instead of annual grades. This involves starting a new class of beginners twice a year, having twice as many grades as there are years in the course, and graduating two groups annually. By this means the evils of retardation and the obstacles to acceleration are, at most, but half as great. The half-year interval is not so great but that the

ambitious child may make up his deficiencies and overtake the grade ahead by means of vacation and private study. The plan is in very general use. It is capable of the same improvements as the annual grade plan and is subject, in less degree, to the same evils of mechanical rigidity.

Shorter intervals. Still shorter intervals between classes, six to ten weeks, have been advocated and have proved successful where the size of the schools insures a sufficient number of teachers. Dr. W. T. Harris had such a system in St. Louis as early as 1870 and said of it, "Should it be necessary to put back a pupil to a lower class, he finds it at just the stage of progress which will enable him to review and strengthen those portions of his course that need it."

Special classes. Dr. Harris also sought to remedy the waste arising from misfits in the grades by establishing special schools and classes. Such special classes have been largely introduced in recent years. They are unquestionably necessary for the physically and mentally deficient who cannot profit by the regular instruction of the school, but the normal child who has merely got a little behind his class should be able to find his level in the regular school. Cubberly names twenty-two kinds of special classes which have been organized to provide for those who cannot be fitted into the regular work.

Cambridge "double-track" plan. In Cambridge, Massachusetts, the "double-track" plan was devised by dividing the grammar-school course of study in two ways. It was divided (1) into four parts, each of which would constitute a year's work for the more capable pupils, and (2) into six parts, each being a year's work for a slow pupil. More recently it has been applied to the entire elementary course. This is divided into eight yearly grades of three terms each and also into six grades of three terms each, except that the last year in each course is divided into two parts. This gives

the rapid group one-third more work than the slow ones in each term and provides five different points at term ends at which the two divisions are together, if both sections start at the beginning of every term. Transfers may be made from one to the other at any of these five points. Any given pupil may thus complete the course in anywhere from eighteen to twenty-four terms without being turned back at any time. This plan is adaptable only for large school systems and as a permanent policy. It cannot well be tried out in less than eight years. It tends to keep the poorest pupils together and in many particulars may be made as mechanical as any other plan.

Pueblo or individual plan. A radical plan of escape from the Procrustean systems of grading was that adopted by Superintendent Search at Pueblo, Colorado. He abolished class recitations on the ground that they are full of "dead time" and that "they reflect on the honesty of the pupil's preparation." Occasional class exercises were for the purpose of presenting fundamental principles or working directions. There was no attempt to keep pupils together, but each task must be finished before the next was undertaken and every part of every lesson was recited by each individual. No home study was permitted and very large discretion was given the pupil as to the direction of his time in school. It was claimed that this plan relieved physical strain; trained independent, self-reliant workers; that more and better work was done; more supplementary work could be accomplished, and that there was more enthusiasm and less discouragement than under the grade system.

Batavia plan. Superintendent Kennedy of Batavia, New York, introduced a plan of supplying additional teachers to coöperate with the regular class teachers by supervising the study of pupils individually. This plan admirably combines the advantages of class recitation and

of individual training. The essence of it is that it provides for individual instruction at regular periods by competent teachers and on a definite pedagogical basis, as a supplement to the usual class work. As the principle may be adapted to almost any conditions and may be used by one teacher in a room by providing study periods, it has been very widely used with generally favorable results. The danger is "that the weaker pupils will be still further weakened by a 'coaching' process that does nothing whatsoever for their real education." This, however, is a fault of the instruction and not of the plan. The technique of individual instruction in plans of this sort necessitates that (1) nothing be told the child and nothing done for him but that he be stimulated and directed to finding out and doing for himself, that is, instruction must be by "development"; (2) initiative in helping must be taken by the teacher rather than at the call of the pupil; (3) no instruction shall be given upon the advanced lesson. It must never degenerate into helping children to get their lessons. Teachers must discover in class recitation and by individual testing the needs of each child and direct the particular exercise which will remedy the deficiency. Attention to individuals aims to prevent retardation, to accelerate the progress of the class, and to aid more capable pupils to get into more advanced classes. The value of the system depends on the spirit in which it is carried out, but the need for individual instruction and for separate supervised study periods has been established beyond question.

Flexible or shifting group plan. In various cities — Seattle, Denver, and Elizabeth, New Jersey, being among the pioneers — there have been adopted plans of organization varying somewhat in detail from a plan outlined by Dr. W. T. Harris in the St. Louis reports of about 1870. The essence of all these is flexible grading, with groups progressing

through the course of study at varying rates and pupils transferred from group to group at any time according to their individual needs. Under such a plan the beginning grade is tentatively separated into two groups at the end of the first week or two, one group consisting of the most capable third or half of the class. The slower group may be divided again after a month or so of further trial. The groups remain in the same room under the instruction of the same teacher and in some exercises are taught together as a single class. Each group advances along the prescribed course of study as rapidly as it can do the work satisfactorily. At the end of the year the middle group will have just about covered the requirements for the grade; the slow group will lack about a fourth of completing the requirements, and the rapid group will probably be one fourth through the work of the next session. During the second or third term the fast group will have overtaken the slow group which started one term earlier. These are then merged and proceed as one until another separation becomes desirable. Some of the members of the section overtaken will be caught up and taken ahead with the more rapidly moving group, and some of the rapidly moving section will be left to go for a while at the slower pace. Before long the middle group will have overtaken this same slow group and the rapid group will have overtaken the next group ahead. There is thus a constant merging and reclassifying, each group changing its personnel and taking its grade name, as 4 A, 5 B, etc., from its position in the course at the time. In each group there may be pupils who are going through the course at every possible rate of progress. Each child has the opportunity by outstripping his group to pass presently into one that moves more rapidly. If always among the best, he will finish an eight-year course in six to six and a half years. If always among the slowest he

will require ten years or more. In neither case is there any reason for skipping or for being turned back over any portion of the work. The pupil who falls behind because of absence may do the lost work in a lower group while continuing to advance with his own class or he may drop back into the next section and then work his way up by keeping at the head. The sifting is upward instead of downward. There are no "failures," but the poorest pupils advance only so fast as they are made thorough on the essentials. The abler ones increase their speed much as a man runs up a moving stairway, by moving from step to step as the steps themselves move upward.

With semiannual or shorter intervals between the admission of new classes, pupils should ordinarily advance from room to room only at the end of the term. Any teacher may thus be called upon to teach groups as much as a half term above or below that prescribed for his grade. A pupil might skip a given room without skipping any of its work.

Flexible subject grouping. The grouping and advancement in the plan just outlined is based primarily upon fundamental attainments in the formal or basic subjects. It is usual to have distinct grouping in reading and number work in the primary classes; and in arithmetic, language, geography, and history in the grammar grades. It will frequently happen that a pupil will make rapid progress in one subject while slow in another. This makes his particular weakness evident to himself and to his teacher, and he may devote more of his time and effort to that branch which is difficult for him and less to that in which he excels, until his rate of progress is fairly balanced. He may drop some subject entirely while he is catching up in another. When a disparity of this sort is characteristic of many pupils it is an indication that the course of study is not well balanced or the teacher's methods need revision. In those subjects in

which attainment is more difficult to determine, as reading, or less essential to advancement, as penmanship or spelling, instead of two or three groups to a grade there may be only one. In these subjects minimum capacities to do certain things should be prescribed as the necessary work of the grade. Abler pupils should be stimulated to higher attainments and the time they save through their greater abilities may be given either to enriching the work of any course or to more rapid progress in any subject. In the last year of the course there should be sufficient latitude in every subject for those groups which would finish in the midst of a term to have abundant profitable occupation until the end of the session.

Differentiated courses. This particular idea — varying breadth of the work for varying abilities rather than varying rates of progress through the course — is made the basis of the form of organization known as the "differentiated course" plan, worked out at Santa Barbara, California. A course was prepared prescribing the minimum requirements for each grade, a second course indicated additional work which should supplement the minimum course for abler pupils, and a third course included still further enrichments. All pupils go forward at the same rate, but the extent of the instruction received in each grade is in proportion to the ability of the group.

Essentials of flexibility. The essential element of any plan of organization which seeks to preserve the individuality and to develop the varying possibilities of every child seems to be *flexibility*. Until there are far more reliable means of determining whether apparent deficiencies of children are real or whether temporary limitations are permanent, even the wisest teachers should be very slow to separate children into permanent divisions. It is not nature's law that children should grow at an even rate. They develop

by fits and starts. Their interests and their moods are changeable. In the effort to provide different sorts and grades of instruction to fit the needs of different sorts and grades of children, let us not assume that we have the knowledge or skill to fit the one to the other except in a general way. We must not forget that, whatever the native possibilities of a child, our putting him in a special class and confining him to special kinds of instruction may give him the bias we assumed that he had or may prevent the developing of the possibilities we assumed that he did not have. Permanent groupings tend to get any mind into a narrow rut at the time it most needs breadth. They fail to develop leadership in the stronger minds and fail to stimulate the weaker or less ambitious children. For these reasons, whatever the size of the teaching corps, every teacher should have not less than two groups in charge at all times, with the continuous necessity of reclassifying the pupils according to their attainments. The teacher of such flexible groups should feel the constant responsibility for individual instruction, for strengthening the weaker pupils and discovering the talent of the stronger ones. Under individual teaching the weaker pupils get the larger portion of the teacher's time and the stronger ones have more opportunity to rely upon themselves.

Values of flexibility. The plan of flexible groups, combined perhaps with the differentiated course in some or all branches and certainly with the study periods and individual instruction of the Batavia system, seems to embody all the ideals of grading. Some of its advantages may be summed up thus:

1. Its flexibility permits almost endless adaptations to varying conditions.

2. Individual instruction and class organization are both provided for, and any variation of these may be utilized.

3. The evils of retardation and the difficulties of acceleration are mostly removed. Every child is placed where he may work to the limit of his capacity and progress directly as he succeeds. It need never be said that "to some there is effort without success; to others success without effort."

4. The incentive of advancement is constantly present to every child; the reward for earnestness always sure, and in direct proportion to effort.

5. The pressure is even throughout the session, not concentrated into a dangerous strain at the time of examinations for promotion.

6. It measures pupil and teacher alike by results, in terms of the pupil-capacities developed.

7. The individual needs of each pupil become the prime study of the teacher and the supervisor. This makes for good teaching and a progressive teaching corps.

8. The teacher must have a specific reason at any time for the precise classification of each child, and this reason becomes a guide for his teaching and for the child's own efforts.

9. The attention of pupils, teachers, and supervising authorities and the content of the course of study are centered upon abilities developed instead of ground covered or time spent on a topic.

10. The continual and inexhaustible stream of bright pupils coming up from below affords a constant stimulus to those who are going at a slower rate. There is no permanent segregation of slow pupils into one class.

11. The plan may be made to combine every time-saving routine device in class organization and yet preserve personal touch and individual attention in instruction.

Teachers who are mentally lazy and those who are professionally ossified invariably object to a flexible system of the sort. The very heart of it is that it keeps them thinking, and demands an unending adjustment of course and

method to immediate needs. Inaction and petrifaction cannot operate such a plan. Perhaps the greatest merit of the whole flexible scheme is that teachers of that sort must change or make their inefficiency obvious. Inexperienced and untrained teachers will find it only a little more difficult than a rigid routine system at first, and if worthy, they will quickly improve by means of its very requirements. If they cannot improve, they should not teach. Such a system inevitably means teacher-growth.

PROBLEMS

1. Investigate and sketch the school history of several children who failed in or repeated one or more grades in a rigid system of gradation.

2. If possible, find the per cent of failures among pupils who have previously repeated some grade and compare with the percentage for the whole school. Does repeating a grade seem to tend to more or less thoroughness?

3. State the desirable and objectionable features of the grading system used in your schools.

4. Describe the best features of any grading system of your acquaintance which you regard as particularly good.

5. How could you embody some of the advantages of flexible grading in your school system, even though the plan as a whole were not adopted? What features of it could be adopted in a single grade, even without adoption by other grades?

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CHAPTER XIII

PROMOTIONS AND PUPIL PROGRESS

Promoting machinery. Every teacher has found difficulty at the close of the term in satisfying himself as to whether certain pupils should or should not be promoted. It is probable that he has found still more difficulty in satisfying other interested parties on this point. To avoid just these difficulties teaching traditions and school systems have built up an artificial mechanism of examinations, grades, and term marks to take the place of the teacher's decision and to bear the responsibility in the matter of promotions. Supported by figures that "cannot lie," the teacher smugly assumes that his promoting machinery "is perfectly fair, because it treats all just alike." In fact, treating all just alike would necessarily be grossly unjust to all but a few; for children, being quite unlike each other, need quite different treatment. And if it were just, it would still be impossible, for what affects one child in one way is sure to affect another child in another way.

Nonpromotions. In a rigid grading system the promotion problem is truly the root of many evils. The doubtful pupil if promoted is likely to suffer through his poor preparation, while from his nonpromotion arise most of the disorders of the classroom, most of the discouragement, the sullenness and resentment, the charges of partiality and unfairness, together with endless friction, complications, and perhaps official interference. One failure tends to beget others, and the repetition of a grade is the first step to elimination from school on one excuse or another. The

consummate waste and crown of dishonor of a school system is the pupils it cannot hold, for elimination from school does not include elimination from the society for which the school was established. Sparta avoided a burdensome class of citizens, because those who were to be eliminated from education were first eliminated from the state by being abandoned to the wild beasts. Our civilization clings desperately to the mere existence of each individual, though often neglecting the greater duty of making that existence worth while to the individual and to society.

There are teachers — a host of them — who pride themselves that they head a certain proportion of their classes every year toward elimination, — that a certain part of their work is always waste. They call it "thoroughness" because they "never pass more than eighty per cent of any grade," whereas *thoroughness* and the number passing have absolutely nothing to do with each other. In some schools, traditions would damn a teacher who did not "fail" some of every class. (Note the transitive use of the verb "fail.")

The evils of retardation probably cannot be wholly avoided so long as grading systems are nonflexible. It is, then, all the more necessary to inflict the evil with the greatest discretion and to turn back only those who certainly cannot profit by continuing longer with the same class. When demotion is unavoidable, it is all important to have the sympathy of the child and of his parents, and thus avoid the most serious evils arising from disappointment and lack of confidence. The *pupil* should feel that there is nothing arbitrary or accidental in the decision and that the lower grade is just the place where he can profit most. This is not "soft pedagogy" but hard sense, for the factor which contributes most to his next year's work and to his ultimate success is his attitude toward his classification and toward his teachers.

The customary agencies for determining the problem of promotions are examinations, tests, written work, grades on daily recitation, and the teacher's judgment. It is not practicable to discuss here the various *teaching values* of these devices. *Each is of large importance in pedagogical economy, but our task here is to weigh them as criteria by which to judge the fitness of the doubtful pupil for promotion.*

Examinations as basis of promotions. The formal examination, despite its educative usefulness, has been thoroughly discredited *as a sole basis of promotion.* Let us summarize its status as such.

1. It is not a reliable measure of attainment. Three sources of *chance* enter into its use; the child's physical and mental condition at the time of the examination, the scope of the particular questions asked, and the different standards among teachers or of the same teacher at different times. Every day some pupils are unable to do themselves justice, while at the close of the fatiguing term, with all the strain of examination conditions, it is certain that several members of almost any class will be in no shape to disclose their true ability on paper. Out of perhaps a hundred comprehensive questions on a course, usually ten are asked. It is possible that among several children of a grade who are able to answer just the same proportion of the hundred possible questions, one might know all of the ten actually asked, another half of that ten, and another none at all. While this extreme variation is unlikely, it is very commonly true that of two children of *equal* knowledge and ability, one gets 78 per cent on a given examination — and passes; the other 73 per cent — and fails. A like difference between failing and passing marks may easily be due to the condition of the teacher at the time of grading. It may arise out of the difference between the teacher's mental condition when starting in on a pile of papers at eight o'clock P.M., and when finishing them at

one A.M., while the variations due to the condition of his digestion, the temper of the superintendent on his last visit, or to the more intimate affairs of the teacher will make a decided difference in the average of the class. An investigation made at the University of Wisconsin showed that a large number of high-school teachers, all well prepared and teaching practically identical courses, conditions being as nearly standardized as can be found anywhere in this country, graded the *same identical paper* all the way from 54 per cent to 96 per cent, with the majority grading close around the passing mark, about as many "failing" as "passing" the paper.

2. So far as the formal examination does test anything, it tests appearances rather than real attainments, verbal memory rather than more useful abilities, the crammed knowledge of the examination day rather than the abilities which will be available in later life.

3. It has a pernicious effect on a pupil's study and habits of study. It puts a premium on neglecting work through the term and on cramming just before examination. It rewards skill in "spotting the teacher," "bluffing," memorizing, and other temporary makeshifts rather than on a true love of knowledge and desire for permanent growth.

4. It is the devil's own device for leading pupils into temptation. Our civilization is disgraced by our putting this premium on dishonesty. We have had to build around it a special code of honor to meet the emergency. Supposedly respectable young people are required to do something which is parallel to being required to sign a pledge that they have not stolen anything whenever they are left alone in a neighbor's house.

5. As an incentive to work, it fails to stimulate those who are most in need of being aroused, while the oversensitive and too ambitious are affected beyond reason or profit.

6. The physical strain arising from examination promotions has brought nervous breakdown and even death to hundreds of the most ambitious and deserving children. The unspeakable horror and pity of child suicide has often been chargeable to the same stupid requirement.

Examinations held monthly instead of once a term may have the advantage of decreasing the strain at any one time and of lessening the element of chance, but this plan multiplies the occasions of temptation, strain, and interruption of regular work.

Informal tests. *Informal and unexpected tests,* oral or written, devised to disclose specific needs to the pupil as well as to the teacher and to correct the teaching process from time to time, besides being among the most useful of teaching devices are invaluable in determining the actual abilities of the pupil. A record of these tests would be a safe basis of judging what the pupil could do at the time they were given. But, with good teaching, it should be almost certain that each deficiency disclosed by the tests would, by the very fact of its disclosure, be removed before the end of the term. The tests are thus better records of what the pupils have done than of what they can do.

Daily grades. The last objection would naturally apply in some degree to the use of *daily grades* as a measure of fitness for promotion. To a good teacher the finding of a defect in recitation means its remedy in instruction. A numerical record of daily recitations, too, will undoubtedly discriminate in favor of that type of children who have assurance and readiness rather than those of slower and deeper thinking. Under many teachers daily grades put a heavy premium on "bluffing." The very keeping of such records is cumbersome, interferes with the teacher's spontaneity and enthusiasm, and forces many mechanical qualities into the lesson. Marking up at the close of the lesson instead

of at the moment merely purchases reduced mechanism at the cost of reduced accuracy in grading.

Teacher's judgment. The "teacher's judgment" is advocated by some as the only safe criterion, but (1) this may mean merely the teacher's likes and dislikes, or (2) granting impartiality, it subjects the teacher to charges of partiality, and (3) it assumes that a purely subjective judgment should be used without rather than with the objective aids which have been devised expressly to guide that judgment. Intelligent judgment makes use of all the facts that can be obtained. When the term "teacher's judgment" is used to exclude all data except the judgment itself, it really means the teacher's feeling, impression, or prejudice.

Combinations. Other plans of promotion combine two or more of the factors mentioned above in various proportions, to determine the vital question of promotion or demotion. It is common to let examinations, tests, and teacher's judgment each count one third; or examinations one half, and daily grades and teacher's opinion one fourth each.

Coöperative classification. A very successful plan is to require every teacher to make out early in the term a tentative list of the pupils who are reasonably sure to pass, one of those who will probably pass if their standing does not fall lower, and one of those who are likely to fail unless their work is improved. All of the last group, and any who may fall into it from time to time, are specially warned, stimulated, and strengthened at their points of weakness. Parents are called into conference and everything possible is done to get them over into the safe list. These lists are frequently revised during the term in conference with the principal. The uncertain list should be reduced to not more than ten per cent of the class by the end of the term. The hopeless ones will have been put back where they can work with hope and profit as soon as the impossibility of

their catching up is conceded by all. All that must fail have then been fully warned, have been given every guidance and assistance, and are fully appreciative of both the necessity and the reason for their failure to be promoted.

Principles of promotion. Following is a summary of principles that should guide in the matter of promotion.

1. Promotion shall not be based on a single test nor a set of tests given at a single time.

2. It shall not be dependent on a single sort of measurement however often applied.

3. It shall not be dependent on any purely quantitative or mathematical grade or combination of grades. There is no 100 per cent perfection in any mental trait nor is there any zero point to be found among school children. Still less is there any mathematical point, such as 75 per cent, which marks the distinction between success and failure.

4. It shall be a gradual process, beginning when the year's work begins and based on every task.

5. It shall be a coöperative process in which the child is consciously participating. Definite standards of efficiency by which the child can daily judge his own work shall be kept before him. He shall be required to criticize constantly his own attainments, discover his deficiencies, and record his own standing.

6. The reports to parents, as discussed later, shall be such as to keep them fully aware of the probability of advancement and the means of avoiding demotion. No friction should ever arise from questions of promotion.

7. Such can and should be the spirit of the school and of its relations to parents that promotion would never be thought of as a matter of favoritism. Neither teacher nor pupil should regard promoting a child as favoring him or retarding him as a point on which there could be a difference of desire between them.

8. It is not the teacher's business to size and reject but to detect and to demonstrate to the pupil his deficiencies and to guide him in remedying them.

A teacher who cannot locate the pupil's difficulty early in the year and plan with him its remedy, who does not know until the term is over that the child's work is not sufficient for his promotion, should not be intrusted with the decision of the matter.

Pupil participation. Keeping pupils in suspense as to their promotion is an objectionable sort of incentive. It induces cramming and spasmodic effort rather than sustained work. The same pressure may be used and its good effects made habitual by means of flexible grading and the pupil's conscious participation in his own classification. Reward for effort, like punishment for wrongdoing, should be so sure and so prompt and so obviously self-acting, that, just as soon as a child has done his duty well, he should know that so far as that task is concerned he is already promoted. Whenever a task has been slighted he should feel that sooner or later it will inevitably and automatically retard him by perfectly natural laws. In a word, the rigid and arbitrary must give way before the flexible and sympathetic, in matters of grading and organization. More than any other change in management this will remove friction, ill feeling, injustice, and waste.

Partial promotions. No pupil should be required to keep on doing something he does not need to do in order to catch up in something he does need. If the work in one subject must be repeated, there must be provision for some means of his utilizing the rest of his time at something in which he can progress and keep interested or, if necessary, he might better be excused from school during that surplus time. A mechanical, lock-step organization, which demands either idleness or the repeating of tasks of no further

educative value, is absolutely hostile to all aims and conditions of good teaching.

Conditions. When a promotion is made conditional upon subsequent work, the condition should be tried out in the upper rather than the lower grade. The question at issue is whether the child can do the work of the higher grade, which obviously cannot be tested elsewhere. In case the promotion is not made permanent, the pupil has lost nothing new by his absence from the lower grade; but if he is to work in the upper grade the loss of the few days' trial would prove irremediable to a pupil already doubtful.

Continuous promoting. Under a truly flexible scheme promotions are not solely from grade to grade nor only at stated times, but daily some pupils are passed up on an assigned lesson or topic while others are held back for further study and instruction. When one boy can add fractions proficiently, it is absurd to keep him learning how to add them because slower pupils have not yet mastered the art. Such management would be on a par with keeping a man working on a job after it was finished because his fellow workmen in the shop had not completed theirs. In no other industry would the necessity of handling the workers in classes or masses be offered as an excuse for keeping one laborer on a task after he had finished it or leaving the work of another uncompleted because he was slow. Every man must have some duty to work at, or he should "knock off." The standards of efficient school management need not be inferior in this respect. The segregation of the pupils of a given group according to their individual needs may not be practicable for lectures, demonstrations, and development lessons, but it certainly is practicable for study, drills, exercises, and practice problems.

Efficiency advancement. In penmanship there should be a standard of excellence for each grade, such as is easily

afforded by the Ayres scale, and any pupil whose written work *outside of the writing class* never falls below that standard should not be required to take the writing drills. At any time when his regular work falls below the standard or fails to show a natural and continuous growth in excellence, he should be automatically returned to the drill class. By this means a few pupils may require little more than occasional corrective suggestions in writing after they leave the primary grades. With good standards in the school and the habit of doing one's best all the time, daily work should give an abundance of penmanship training of a much more effective sort than the detached writing drill. For some pupils, writing drills during a few weeks each year will suffice, whereas others require a great deal of special training to get the necessary muscular coördination. In the latter part of the year writing classes should be small or entirely lacking, but standards of writing in daily exercises very high. Such an automatic promotion out of a drill class serves as an incentive to do all one's writing well, which is the only writing excellence worth seeking. It secures better penmanship than constant drilling can; it avoids the very real danger of "overtraining"; it fixes attention of pupil and teacher upon individual needs; and it affords a very great economy in time.

Spelling drills might well be organized on the same basis. The essence of good spelling is not a memory stocked like a dictionary. It is the habit of *always* spelling correctly words that one already knows and *never* using a new word without finding out how to spell it. The "incidental method" of teaching spelling depends on this faithful persistence for its success. By having the drills only for those who need them and only to the extent that they need them, while others are automatically excused from the spelling class so long as they spell correctly in all their written

work, all the economies and increased efficiency of the incidental method are attained, but without the risk of leaving some who do not respond to that method unable to spell.

Scientific tests and scales. Rapid progress is being made at the present time in the development of scientific measures of efficiency in the more fundamental school abilities. Various tests in arithmetic, spelling, writing, and possibly some in other subjects have sufficiently passed the experimental stage to be used in a practical way, but thus far they are adapted rather to measuring schools and teachers than to determining the fitness of individual pupils for promotion. Much is to be hoped for from progress in this direction, particularly in demonstrating to the teachers of a system or the pupils of a school the need of advancing their standards of proficiency. Principals, at least, should be familiar with the use of these tests.

PROBLEMS

1. What custom prevails regarding the percentage of pupils that are promoted in your school? How does this vary from grade to grade or department to department? Inquire among the teachers separately as to what they regard as the ideal practice.

2. Among retarded pupils how many are doing better work the second year in a grade than they did the first year?

3. Find out by frank conferences with students and former students what effects examinations had upon the regularity of study; upon the quality of study. Do examinations seem to make more for consistent or for spasmodic study? What conclusion would you draw from a statement that examinations make some pupils study who would not study without them?

4. What evidence have you that examinations have had a good or bad *moral* influence?

5. What evidence is there of *physical* injury? Would injury occur if the examinations were not used for promotion purposes?

6. Determine by observation what effect the marking of each answer at the time has upon the force and enthusiasm of an oral recitation.

7. What is the practice at your school regarding the retardation of a pupil for deficiency in one or two subjects? Determine by observation and inquiry what effect this practice has upon the retarded pupil's progress in the deficient subjects; in the other subjects.

8. Study the work of some class with a view to determining how much of the time pupils are spending on work they do not need to do; how much on trying to do what they cannot do. What is the effect of this sort of work upon their study habits?

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CHAPTER XIV

MARKING SYSTEMS

Frequency. In keeping the record of pupils' work there is wide diversity of practice. Some teachers laboriously record a grade for every recitation made, every paper handed in, and every test and examination. Others estimate a grade weekly. Quite common is the custom of grading pupils at the end of every month with or without the aid of written tests or examinations. Again, the daily, weekly, or occasional grades may be combined to make up the monthly grade. Term grades are usually made up by combining these monthly or more frequent markings with the examination standing. The frequency of this grading may be a matter of individual choice, and different temperaments seem to work best under different plans, but in some rigid systems every detail of the grading plan is prescribed.

Numerical grades. A "per-cent method" of grading is a frequent concomitant of mechanical organization. Daily recitations are graded on a scale of 10, and examinations on a scale of 100. The obvious difficulty of grading a daily recitation when different questions demand utterly different kinds and quantities of thought to answer, has tended to simplify the daily marking to a scale of 5 or 3. We have already noted the difficulty in determining the significance of numerical grades. Since the child's attainment in any knowledge or power of sufficient consequence to be recorded is necessarily incomplete and could not be regarded as perfection, what is the 100-per-cent ideal? What is the zero point of no knowledge at all? Does

50 per cent mean half knowing a lesson, knowing half a lesson, knowing half as much as the teacher knows, half as much as the text, half what the pupil ought to know, or half what he could know? Perhaps the usual opinion would be that 100 per cent means that the pupil has done the task assigned as well as could be expected of him; zero means that he has done nothing worth while; 50 per cent, that he has done half the work assigned; and 75, or a pass mark, that he has done just as little as he should be allowed to get away with and not be required to do the work over again. These grades are almost universally given for absolute results, not for educative values nor yet for effort. One gets 90 per cent with practically no effort and hence no educative advantage to himself, while another gets 50 per cent after plodding for hours in conscientious effort to accomplish the task. We have already indicated the total unreliability of such marks, even for indicating the value of what has been written on an examination paper. That they utterly fail to indicate actual pupil-ability is easily demonstrated.

At best we are setting up a mathematical standard of measuring something, we scarcely know what, which is certainly not capable of any such nice distinctions. We have persuaded the pupils and the public and ourselves to believe in something that has no foundation but tradition. It is just on a par with the divine right and rectitude of royalty and the direct curative power of drugs. All are beautifully simple, direct, easy-to-follow ideas — the kind people like to be humbugged with. How simple life and teaching would be were such things true — also how static, mechanical, and uninspiring! Such views of life have the common fault that they stand squarely in the way of the development of a science, whether of government, of medicine, or of teaching.

Modern scientific measurement of mental and social traits is an utterly different matter from that of which we are speaking. Such measurements deal with but a single trait at a time, while school grades always do and should deal with complicated abilities. The former deal with averages of groups, or of oft-repeated identical tests, or with relative rankings, and are as much concerned with sources and amounts of error as with the average or mean itself.

Qualitative terms. Where the quantitative grading has been discarded, often a qualitative series of terms has been substituted. A typical series would run: excellent, very good, good, fair, poor, and very poor. Originally merely descriptive, these innocent terms soon acquired an arbitrary significance. They were explained in terms of the inexplicable. Rules were promulgated to some such effect as this: Excellent means from 95 to 100 per cent, very good means from 85 to 95 per cent, good means from 75 to 85 per cent, etc. Seventy-five still being, perhaps, the passing mark, it is often true that "fair" means not fit to pass, and "good" means just good enough to avoid being sent back. The situation is quite analogous to the grading of butter in which the poorest marketable was "fancy" and good butter was "XXXX," or extra to the fourth degree. Inevitably such descriptive grading marks will lose their meaning.

Letters. The next step forward was to adopt marks which in themselves are meaningless, as A, B, C, D; but these likewise were soon arbitrarily translated into per cents, or for emphasis teachers were prone to give AA or possibly FF — whatever these could precisely mean.

If the grading is to be done in per cents, there is not much use in translating them into some other symbols and then explaining these by a convenient note on the report

so that they may readily be translated back into the per cents. It is true that a "C" or a "good" does not make pretense of a distinction between 77 per cent and 79 per cent or 82 per cent, but it does make a fatal barrier between 74 per cent and 75 per cent.

Departmental variations. Further indication of the unreliability of all these systems of grading — word, figure, or letter — are evidenced by the grading of different teachers on the same group of children. In every high school, college, or other institution where departmental teaching prevails nothing is better established than that some teachers are chronically severe markers while others are notoriously easy. One will characteristically, year after year, report about thirty per cent of every class A's and perhaps twenty per cent C's; while another dealing with the same identical pupils will perhaps run about five per cent A's and seventy per cent graded C or lower. The high grades of the one may be variously interpreted as signs of thorough teaching or of slack examining; and the low grades of another as an indication of poor teaching or of severe testing. At any rate, the low-marking disposition has usually been the most assertive and has assumed the "thoroughness" pose, overlooking the fact that thoroughness in teaching a course should show a very high final grading.

Normal distribution. The demonstrable lack of any fixed relation between a mark and the ability which it is supposed to measure has led students of scientific measurements to conclude that the only reliable grade is an approximate *relative ranking*. One cannot say how much ability of a certain sort a pupil may have, but one can tell with reasonable accuracy whether he has more or less than most of his group, and usually whether he has more or less than any other given individual. It is also true that in any trait or ability there will be in every group not specially selected

a *normal distribution*; that is, there will be very few of very high ability, more of medium high, a large proportion of average ability, and a similar tapering off at the lower end of the curve. Every school class is, with reference to the work of that grade, a normal group. Whatever is the average or mean ability of the class, the majority will cluster closely around it. The farther we go above or below that mean, the fewer individuals will be found. There is always an average or mean attainment which is to be expected of any class and for which the class itself is not responsible. The teacher may pitch the requirements too high or too low for the preparation of the grade. His method may result in a few things being taught very thoroughly or many things very poorly, or possibly many things well or a few things poorly. In any case, an examination given by the teacher himself may result in high grades or low ones, absolutely without relation to the educative value of his course. This "personal equation" may involve no insincerity or favoritism. However the grades may be given, the fact always is that a few pupils in the class are far better than the average, the number increasing toward the average and decreasing in the same general ratio to the one or two worst ones. Certain conditions may "skew" this curve a little either way; for example, the instruction might be of such a sort that many would reach a certain proficiency and none could possibly exceed it, or by extra care with the backward ones the poorest might be brought to a minimum efficiency which is close to the average attainment.

Relative ranking. It has therefore been found that the fairest and the only reliable way to grade is simply to make an arbitrary division of the class approximating the normal distribution curve and require each teacher to rank a fixed proportion of the class in each of these divisions. For instance, in any class there will be found 5 to 10 per cent who are

excellent as compared with the rest of the class; about twice as many who are very good; 40 or 50 per cent who are somewhere around the average; about as many are poor as are very good; and as many are very poor as are excellent. The grades of every teacher should show just such a distribution, whatever the scope of the marks he uses. This normal distribution curve is more nearly the mathematically exact truth than any other grading of their work or papers could be. This is the safest measurement that we have any means of substantiating. When it has been decided how many individuals shall be graded "A" or "excellent" in a given class it is not hard to select them, and there is little more difficulty in placing the others in the required groups. We cannot presume to state *how much* ability a pupil has nor *how valuable* his work has been, but we can state his relative standing in the class with reasonable accuracy.

A very satisfactory plan and one which has proved easy to use is to let A mean "one of the best quarter of the class"; let B mean "one of the second best quarter"; let C mean all the others who have done a passing quality of work; and let D mean that the work so marked is not acceptable or up to passing requirements. It should not be the policy of the school arbitrarily to *require any to fail*; therefore abundant notice, special instruction, and frequent reclassification should eliminate D's from the final marks. Any other fixed meaning to these grades, so long as it is clearly defined in terms of class ranking, is permissible. Some school officials prefer only two grades on work that is passed. In this case it is important only to indicate what proportion of the class must receive A and what proportion must receive B. Others insist on allowing no other distinction than "acceptable" or "unacceptable" to be applied to any recitation, examination, or final grade. Whether finer distinctions than these have any reliability

when converted into measures of the abilities needed in life may be a question; but it is difficult to find any educative value in making them.

Awarding honors by chance. Our tradition-trodden pedagogue replies that we need these fine distinctions as a basis of awarding honors and prizes if not for promotion. One high-school graduate is awarded a medal or the honor of being valedictorian of the class on the ground of having made a general average of $97\frac{1}{4}\frac{6}{5}$ per cent as opposed to another's $97\frac{1}{4}\frac{3}{5}$ per cent! Can such things be? and education purporting to be a science! My reader will bear me out that such things are and that they are accepted seriously by the pupils, by the parents, and by the teachers. Between these two pupils there may be a difference of 1 per cent or of 40 per cent of effective ability in favor of either one. How infinitely fairer to toss a coin for the honor, if there be but one to award, and let it be known that both deserve it — equally, so far as anyone knows!

Instructive grading. That marks of any sort, numerical or otherwise, do in a general way indicate the relative abilities and attainments of the children, no one doubts; but the evidence we have for this belief is what we know without the marks. Why do we need so cumbersome a means of telling what we already know? That they do serve, in a manner, as an incentive is equally obvious. But it is also evident that they commonly stimulate those who least need it and are of no effect on those who need it most. As reward for effort, it has been indicated that they are more likely to reward inherited brilliancy than deserving effort. By so doing they as often tend to make the favored ones idle and the unfortunate ones discouraged as they accomplish the intended spurring up of the lazy ones. As a convenience to the teacher in determining the relative ranking of pupils or in keeping memoranda for his own use, any of

these marking schemes may be of considerable value. Whenever mere *valuing* of the pupil's work by this means interferes with the pointing out and remedying of defects, the marking is doing more harm than good. *Grading should be more instructive and less judicial.* It is of little consequence to the pupil or anyone else whether he gets a "perfectly fair mark" or any mark at all, but it is vitally important that he be helped to remedy each fault as economically and as permanently as possible. Pupils and parents may demand exact grades, but pupils and parents take their cue from the customs of the school. When we have with sufficient clearness laid our emphasis upon the correcting of specific faults and the developing of definite abilities and have reorganized our school traditions accordingly, there will be the same demand for these on the part of parents. Let us not be anxious either about the incentive. "Accurate in all fundamentals and in the use of the decimal point" is just as stimulating and far more exact a grade than "B plus" or "$91\frac{3}{4}$ per cent."

PROBLEMS

1. By inquiry among several teachers find what proportion of them in grading a paper mark down for spelling, punctuation, penmanship, English, or general appearance.

2. Select a few average papers on different subjects and have each of them graded by several different teachers. Give no instructions except that each is to grade as if the paper were from his own class and no mark is to be made on the paper. What do these marks indicate as to the absolute value of the grading?

3. Have several teachers who use letters or words for grading indicate exactly what they mean by each grade given. (Assuming that the meaning of the term has not been specified by regulation.)

4. Tabulate the grades given in any one examination or in any year by the several instructors in any school conducted on the

departmental plan. Graph these results for comparison. Compare the marks of different instructors for the same group of pupils.

5. By inquiry among students, determine which instructors are regarded as "hard" and which as "easy markers."

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STRAYER AND NORSWORTHY. How to Teach, chap. xv.
WHITE. School Management, pp. 154–158.

CHAPTER XV

REPORTS TO PARENTS

Effects of the usual type of report. It is a common custom to send reports of the pupil's progress to parents at regular intervals, usually monthly. These ordinarily state the absences, times tardy, and give the recorded grade on "deportment" and on each subject studied. Grades are given in per cents or some of the other symbols already described which are often translated into per cents by an explanatory statement. So frequent was it for children who had unfavorable records to intercept these reports, even though sent by mail, that cards or booklets to be signed by the parent and returned to the teacher have come into general use. It is not uncommon for the pupil even to forge the parent's signature to these. Naturally the child who tampers with his reports is the one most in need of a full understanding between teacher and parent as to his progress.

Parents receiving these typical reports have no guidance as to the treatment which should be given the child. Most of them regard the report merely as a form of expressing approval or disapproval of the child. If the grades are low, the more interested parent may give the child a scolding, or force him to longer hours of home study, even though too long hours of misdirected study may be the chief cause of the low grades. Two children of the same family have been known to bring home reports on the same day, one with the mark of 87 per cent in English, the other of 92 per cent in the same subject. But the 87 per cent was the highest mark given in the one class, while the 92 per

cent was below the average in the other, and the 87 per cent represented much more and better work than did the 92 per cent. The conscientious parents, not having the other grades given in the two classes before them, reproved the 87 per cent pupil but rewarded the other and held him up as a good example. This extreme case indicates how little the reports actually tell of the pupils' progress.

Too familiar to need discussion is the pathetic sight of groups of children comparing grades on the first of the month: the pupil who has got 79 per cent crowing over another who has got 76 per cent by means of twice as much deserving effort and educative painstaking. Children who have grown up through long years of judging and being judged in terms of these figures that have so little relation to any genuine measure of worth are in proper training for the "dementia Americana," which is said to measure all human worth in terms of the bank account, however attained.

What the report should do. The report on the pupil should give genuinely intelligible information by which the parent may know not only how the pupil stands as compared to what is expected of him and what is realized by the class as a whole, but specific information as to the nature of his weakness and the way in which the parent may coöperate for the child's better progress. It should make as clear as possible what the teacher's plans and efforts for the child are. It should bring about a more sympathetic and cordial relation between the parent and the school. It should express the teacher's interest in the child and show his desire to do something more than the routine and perfunctory duties of the classroom. It should have a personal character. It should afford a basis of better understanding between the child and parent and a practical starting point for effective coöperation.

A satisfactory form. A form of report which seems to have accomplished these aims in actual use is prefaced by the following explanatory statement:

To Parents:

This report is sent you with a view to giving a clear statement of the pupil's progress, his standing in his classes, and his individual needs.

The pupil has been asked to read the report and discuss with the teacher anything that is not clear to him.

We believe that when the pupil, his parents, and his teacher thoroughly understand each other and join in studying the pupil's needs they will be able to secure the most favorable conditions practicable for his advancement and development.

Please remember always that we have no other aim than the pupil's progress in the kind of education that seems most worth while, that we are glad to talk over our plans and policies with you, and that we welcome your friendly suggestions and coöperation.

The letters following the name of a subject indicate the teacher's judgment as to the pupil's standing compared with the other members of that class: A means that in this subject he stands in the best quarter of the class; B means that he is in the next best quarter — above the average but not among the best; C means that he is doing only average work with a reasonable prospect of passing up with his grade; D means that the work is poor and if not improved he will probably be unable to continue the work with the grade. Every D should have the combined attention of the teacher, parents, and pupil, to remedy the difficulty which causes it.

Note especially the grades on Deportment and Application. One is not always at fault because his grades in studies are low, but his CONDUCT and his EFFORT are within his control. These show how he is TRYING and indicate more than all other grades what his final success in school and in life will be.

Watch the reports of Tardiness and Absences. We cannot teach children if they are not at school. Every case of irregularity in prompt attendance is a serious loss to the child and an interruption to his class. This is your responsibility. Please have him on time every day.

Please note carefully all criticisms and requests of the teacher and write on the opposite page any questions you may desire to ask, any suggestions that you think would be helpful, and say what steps we may count on your taking toward carrying out the suggestions of the teacher for the good of the child.

Its use. This is followed by the grades according to the plan indicated, and there is abundant space for comment by the teacher and for the parent's responses. The following instructions were given the teachers as to the use of the reports :

INSTRUCTIONS FOR USING THE PUPILS' MONTHLY REPORTS

Pupils in Group A [advanced group in flexible system] of any grade will ordinarily be marked A or B. Every " D " is to be a matter of investigation and conference with the principal and must be followed up from month to month with further reports until the defect has been remedied as far as possible. The " D " must be a decided stimulus, though not a whip. It should serve definitely as a warning and be made the subject of consultation with the pupil so that no pupil or parent will have the slightest surprise in case of retardation.

Seek to make some kindly and helpful comment on every report. Encouragement, discreet praise, warnings, inquiries as to home situations that affect school work, are all in order, but most important are practical suggestions looking to more effective progress. Avoid general criticisms or vague suggestions. Most parents do not know how to help children wisely. If you wish their coöperation, indicate exactly how it is to be done.

Let your comments show that " D " means *danger*. When a pupil makes " D " it is your business to know the exact nature of his trouble and to be able to make it pretty clear to both him and his parents. Call the principal's attention to every " D " and your comment on it before the report goes out.

Do not allow comments to become mechanical or stereotyped. Let them breathe a spirit of coöperation and genuine personal

interest. Make them suggestive and advisory — never dogmatic or censorious. Invite suggestions and conferences.

Be generous with commendation for genuine effort and improvement, especially with pupils who are weak or easily discouraged. The more generously you commend, the more weight your adverse comment will have without being unduly harsh.

Avoid comments on natural ability or lack of it. The marks sufficiently indicate absolute attainments. Consult parents privately regarding treatment of defects or provision for native brilliancy.

All severe or doubtful criticisms should be referred to the principal before being sent out.

Comments must be carefully thought out during the month. They cannot wisely be left till the day the reports are due. The mere grading is very easy and can be done with little effort, but the comments require time and thoughtful planning.

Follow up your comments. Once a need for improvement is pointed out keep on pointing it out until you get the improvement.

Specimen comments. The teachers' comments and the parents' replies have been a revelation and an inspiration. The splendid human quality of many of these cannot be indicated out of their setting, but some extracts taken almost at random indicate something of the range they may have.

"G—— has not improved in his reading. Please have him pronounce the hard words to you. In geography he did not measure his map carefully. I am disappointed in his conduct for he talks sometimes and keeps others from paying attention." (Reply) "Sorry to get report of my boy's misbehavior and hope it will not occur in future. If you could let me know of his bad conduct at once I will see that he gets punished at home. I want to coöperate with his teacher in every way that I can." (Next month) "George has improved as much or more than any child in the class. If he is careful all the time with his writing, he may get into the A group."

"P——, you see, has improved in almost every class. I am proud of his effort. He may begin to write with ink as soon as

he can keep his letters uniform." (Reply) "I am glad to see that he has improved. I shall let him practice with pen and ink here at home if you say so."

"C—— has improved very much in some ways. He is still careless about the work and the papers that he has at home. He asks to be excused quite often and stays out too long."

(On a deficient pupil) "P——'s letter, written Thursday, was beautifully done. I hope he will always take such pains with his writing. As a rule his letters are too cramped. His number work has improved with his trying and our extra work together. He should do still more of this work with numbers. In drawing he should listen more carefully to directions."

"F——'s conduct is not graded higher because he disturbs other people sometimes and he sits too lazily."

"It is a pleasure to have M——. She is timid and will not speak out in reading. This keeps her from getting A. If you will help her to overcome this, I think she will be my best reader. She is not sure of herself in multiplication." (Next month) "M—— is improving in her reading and speaks out quite distinctly."

(A boy whose father complained to the Superintendent that he had no work to do at home. The complaint was not repeated after this report arrived.) "I don't think J—— puts quite enough time on his home work. He could easily get A in reading. His spelling is improving. He is not accurate in multiplication and I should be glad if you would practice him at home." (Next month) "J——'s work has improved this month."

"I hope H—— will work harder and do as well in other subjects as he does in number." (Parent's reply covers whole back of report. Expresses appreciation and desire to coöperate and points out that trouble was largely due to the fact that the child seldom knew just what was required of him. He was slow and commonly did not get all the spelling list from the board or did not know just what was expected of him in other assignments. Close of reply) "Please, Miss ——, impress upon him as plainly as possible what his studies are, and you may be assured that I will do my best to promote his progress and see that he comes up to the rules, for *I do so want my boy to do well in school.*"

"We missed E—— very much while she was absent. She helps to make the grade bright and interesting."

"It is a pleasure to teach V——. She is so quiet and polite and tries to get everything right." (Reply) "We are very proud of this."

Effects on teaching. Probably the greatest value of these reports is the effect on the teacher's work. It insures individual teaching and a constant study of individual needs. A collection of one teacher's reports with replies may be passed along to others or be made the basis of study in teachers' meeting. The discussion of them will suggest solutions of numerous difficulties in discipline and method. The effort to explain low grades so that pupils and parents will both understand what should be done to remedy them necessitates clear thinking by the teacher and gives the supervisor an admirable starting point for helpful oversight and criticism. Quite often the teachers have asked the supervisor, "Please watch So and So's reading and tell me what is the matter with him." This leads to very profitable discussions and always to better teaching. These reports show up the qualities of individual teachers in marvelous fashion. Constant watchfulness is necessary to keep some teachers from dropping into stereotyped formulæ in their comments — but even this tendency reveals the quality of their teaching.

Such reports have served very effectively to introduce parents and teachers to each other and to bring about kindly visits instead of the formal visitations that have often presaged trouble. It is easy for the teacher to intimate on such a report that he would like to talk over Johnny's difficulty with his mother and thus prepare the way for a profitable visit of the parent to the school or of the teacher to the home. They have eliminated all surprise, friction, or charges of partiality in matters of promotion. In four years' use of such reports not one harsh or irritating reply was received from a

parent, though there were very many touching responses which disclosed unsuspected home difficulties, brought unexpected home coöperation, and gave the work those heart thrills that make a teacher's life rich and beautiful and afford the intangible rewards of teaching.

PROBLEMS

1. Find out from a number of parents just what they have inferred as to their children's standing from the perfunctory reports received. Compare carefully these several inferences with the relative progress of the children.

2. Find out from careful inquiry just what the parents said or did to the child in response to the monthly reports received in a number of cases. How did these responses compare with what they should have been? Would the response have been different if the information had been clearer?

3. Can you find any indications of reports to parents having been intercepted or tampered with by the children? What would you say of the spirit of the school work which would afford a temptation or reward for such deception?

4. Just what kind of information is it that parents want and should have regarding their children's progress at school? What kind of marking or reporting will most clearly indicate this?

5. Formulate comments and helpful advice which you think most needed in connection with the marks on several actual reports.

6. Formulate comments and suggestions which would tend to encourage a timid child; to steady an impulsive one; to arouse a capable one who is well up in his work but not working up to his own ability.

CHAPTER XVI

THE DAILY SCHEDULE

Traditional forms. Rigid mechanism has proved the bane of the schools in the matter of daily schedule as in everything else. It has been usual to divide the minutes in the school day by the number of classes to recite, and thus to determine the length of each period. Daily schedules commonly have the same length of periods for all subjects in the same grade and almost always for the same subject on different days. Yet if there is one thing perfectly obvious it is that any class needs more of the teacher's time and attention on some lessons than on others even in the same subject.

Principles of the schedule. We are confronted by the problem of conserving the economy, convenience, and uniformity attained through a definite daily schedule, and at the same time avoiding its destructive rigidity. Before presenting a solution of the difficulty, let us have in mind the aims that should govern in making a schedule.

I. Physiological Considerations

1. The length of the recitation period, as of the school day, should increase with the age of the pupil. Beginners should not be confined to one sort of activity for more than eight or ten minutes, but high-school pupils may well concentrate on one thing for forty minutes or an hour. Three hours is sufficient for a school day in the first grade; six is not too much for the high school.

2. The length of the period should decrease as the intensity of the mental application or the fineness of the muscular coördination required increases. Or, to put it another way, the intensity and accuracy *will decrease* as the length of the period increases.

3. The length of the period should decrease with the monotony and increase with the variety of the activity required in the lesson. Drills on multiplication should be in three-minute to five-minute periods preferably and at very high pressure, while a theme, for example, Hiawatha, may be developed through reading, story-telling, drawing, writing, language work, construction activities, etc. and occupy a whole day if desired.

4. The "hard" studies should have the best part of the day. The best hour for work is that immediately after the morning exercises. It seems to be generally assumed that arithmetic is the hard study, but the writer has interrogated a large number of teachers and students and has never yet found a group in which the majority had themselves found arithmetic the hardest subject either to teach or to study. There seem to be more who regard grammar and the language studies as hardest, but there is no approach to agreement. The same inquiries have indicated that while there is considerable difference in the aptitude of pupils, the largest factor in the difficulty of a study is not the subject but the methods of the particular teacher. Whatever subject is at the time causing special difficulty for the class or teacher may be temporarily given the best of the day.

5. Similarly, subjects requiring little concentration should be reserved for the close of the day or for a period just before or just after the noon recess. These subjects also would be selected according to the methods or aims of the teacher. Commonly they are physiology, history, or literature.

6. Fine muscular coördinations, as in writing and drawing, should never be required just after the physical strain and excitement of playtime.

7. There should be alternations of intense and of easier tasks, of mental and of physical application, of study and of recreation. Calisthenics, singing, marching, or games which flush out the lungs and invigorate the circulation should interrupt sedentary work about once an hour in primary classes and almost as frequently among older children. This physical relaxation should be free and easy, not requiring finely coördinated drill nor intense attention. Severe, formal drills have a valuable function, but they are not recreation.

Fatigue. In this connection it will be well to note the salient facts regarding fatigue as it concerns the school schedule. Actual physical fatigue is probably due to the presence in the blood of a toxin produced by the process of using up the tissues of the body. Normally this is removed by the various excretive organs. During periods of activity the toxin is produced more rapidly than it is removed, and the balance is established in periods of rest. An excess of the toxin in the system gives one the sensation of being tired. The tired feeling, however, is more often due to sluggishness of the vital processes than to overactivity. When a school child is physically fatigued, that is, suffers from the actual presence of the fatigue toxin, it is not likely to be due to overwork but to some such causes as these: pathological conditions such as anæmia, indigestion, nervous disorders, or perhaps tubercular affection; adenoids, enlarged tonsils, etc.; lack of sleep, unwholesome food, worry, fear, or other emotional disturbance. From such causes the school may be the innocent sufferer, but it is the guilty producer of much actual fatigue caused by eyestrain due to bad lighting; by nerve-strain due to any uncomfortable

or irritating conditions; by worry or fear arising from methods of discipline; by bad posture causing strain of the muscles of the back and neck and restricting the action of the vital organs; by overstrain of any one set of muscles due to too long confinement at one task; by lack of the exercise which stimulates all the organs to effective functioning; or by bad ventilation, involving, as has been shown, lack of surface stimulation by air currents, lack of oxygen, excess of impurities, high temperature, and improper humidity. Tests have tended to show that fatigue is least at the beginning of the school day and increases toward the end, as would be expected; also that it diminishes rapidly at each recess, despite the greater bodily exertion of playing, though not to the point at which the day was begun.

Investigations bear out the conclusion that physical fatigue does not result *from school work* in any degree worthy of consideration. A healthy child under wholesome conditions can work at practically maximum efficiency at the close of the school day without the slightest injury. Every person in good health probably has an abundance of reserve energy which is seldom drawn upon except in very strenuous physical exertion. Instead of being dangerous, it is a most valuable habit to work close to one's maximum capacity. Only thus is one's capacity increased. The majority of persons go through life doing all things far below their ability. More work means more energy, more vigor, better health, and greater joy of living, besides infinitely greater achievement. *We need not fear injurious fatigue among school children if we can be absolutely sure that physical conditions are wholesome.*

A very different matter is that other and more common sort of tiredness, mental ennui, tedium, weariness, or whatever it may be called, which is often termed "mental fatigue." This is not at all dangerous except to habits of

work. It has no demonstrable physical reality, but it is none the less a real interference with mental work. It is due to monotony, dissipated attention, lack of interest or motivation, a lack of a *feeling* that the thing to be done is worth doing. It can no more be banished by the teacher's fiat than the physical sort can. It is like the thirst which the child thinks he has when he has nothing else to think of and which is not lessened by his being told that he cannot drink or that he is not thirsty. This mental pseudo-fatigue seems to be a suggestion of a sensation so decided, and yet so vague and indefinite of cause and of symptom, that the wisest and most self-controlled cannot avoid getting "tired of" that in which they are not interested. It is a psychological reality as truly as is the study or interest with which it so effectively interferes. *The obvious and the only remedy is good teaching, with abundant motivation* for the tasks assigned, frequent change of occupation, avoidance of interruptions and distractions during the time of concentration, and constant adaptation of work to the pupils' interests.

The application of this interpolated discussion of fatigue to the making of the daily schedule is obvious and is covered by the various principles stated.

II. Pedagogical Considerations

1. The length of the period should not depend in any degree whatever upon the number of recitations which the teacher has to hear. *Economy of time can be attained only by fitting the length of the period to the pedagogical needs of each lesson.* Waste is sure to result from cutting periods too short for effective recitation or from fixing a length which may be too little one day and too much another.

2. When a teacher has more than two grades or groups in all the common school branches, the day is too short to provide a distinct period for each lesson.

3. Some subjects by their nature require more sustained thought and longer periods for recitation than do others. All subjects require longer periods for some recitations than for others; for example, the *development* of a new topic in arithmetic or history demands the uninterrupted direction of the teacher for some time, while a *recitation* on the same subject next day requires perhaps half as much, and a *drill* on the essentials a few days later may demand still less.

4. Some lessons demand the constant participation of the teacher, as an inductive development; others may be conducted most profitably by any pupil, as a drill on fundamentals or a dictation lesson; in still others, as the working out of problems, the pupils are best left to themselves, and the presence of the teacher hurrying them to finish before the scheduled period is up is an actual hindrance.

5. Monotony may be avoided, economy enhanced, and various social values very much increased by frequently changing the personnel of the recitation groups: for example, both groups of a grade should work together regularly in some subjects, and in others occasionally or at stated times; all the groups in a room may be thrown together at times for special sorts of work, and this with or without notice; or they may be pitted against each other variously for competitive drills.

6. The necessity for frequently recurring reviews invites special combinations of classes. A group which passed over a certain important summary the previous year may be combined with one which passed it two months ago, and with one which has just reached it. The advanced group having no special preparation, and the others being relatively quite fresh on the topic, the contests are genuine

and keen. The characteristically hard and important points should become traditional as "joint-contest lessons," and warning that a topic is likely to be so used will serve to insure any class making itself thorough and permanently sure on that topic.

7. Provision must be made regularly for study periods and for individual instruction. These, like the recitations, require more time for some subjects and for some lessons than for others.

8. Opportunities should be afforded for special groups of children to work together on distinct projects and special assignments. Some of the finest mental and social values are attained in this way.

9. It is economical and thoroughly practical for a teacher to conduct two or more lessons *of certain kinds* at the same time: for example, spelling dictated to groups alternately; one group may work problems at the board while another has oral drill or seat tasks; one class may be self-conducted under the teacher's oversight while another is being directed at their seats. The self-conducted class is the climax of good teaching.

10. Permanent groups that are too small are as objectionable as those that are too large. In small high schools particularly (just where economy in class time is most needed) instead of little groups of two to ten being kept constantly together, classes should be combined in science, history, literature, and other subjects in which a particular sequence is not imperative; for example, physiography and chemistry may be offered one year, and biology and physics the next. Thus every pupil in his course will have a chance at each of the four sciences. By halving the number of classes the limited teaching corps has twice as much time for each. The same principle may be applied to several subjects in the grammar grades.

11. Time may similarly be economized by alternating lessons daily or by terms. Better far than having scrappy, fifteen-minute lessons in geography and history for all the year is to have thirty-minute lessons in one three times a week and in the other twice, or in one daily for half the year and in the other for the next half.

12. The more rapid groups increase their capacity and self-reliance by constantly increasing self-direction in both study and recitation, thus requiring less and less of the time of the teacher. Weaker groups, on the other hand, require more instruction and study supervision. The proportions must necessarily vary from lesson to lesson.

13. The whole plan of dividing the work of pupils strictly along the lines of subjects has been assailed time and again. While no very radical change is likely to come into general use, there should at least be opportunity to correlate and consolidate kindred subjects when desired. Nothing in the schedule should prevent the merging of history and civics, or history and geography, or the several language arts with each other or with any other subject.

14. Habits of concentration and prompt dispatch of work are worth more than any mere uniformity. Work should be done for a reasonable time under high pressure. When completed it should be laid aside, regardless of schedule. Taboo all dawdling.

15. Individual variations in ability demand that only the maximum time allowed for a task be specified in the schedule and that the more rapid workers be free to leave any task when completed. This can be provided for in part by elastic assignments, — that is, supplementary readings and problems for those who can get to them, — but rapidity and concentration are better encouraged by allowing the pupil to devote the time saved to some self-selected reading or project instead of requiring additional work in the same

lesson. A fine opportunity for the exercise of teaching foresight and skill is afforded by the provision of well-motivated work for spare moments.

16. The standard forty-minute period on which high-school credits are usually based has frequently been construed to mean that forty minutes daily must be spent by the pupil in reciting, whether he knows anything to recite or not. The term should be construed to mean not less than forty minutes daily of the most profitable work under the immediate and undivided oversight and direction of the teacher. Ten minutes' talk in class and forty minutes' intelligent study are worth incomparably more than forty minutes' talk based upon a superficial ten minutes of study. The forty-minute recitation period is about the poorest standard of uniformity imaginable. The equipment, the teacher, the additional study time required, and the ability of the individual pupil all make for the widest conceivable variation in the educative results from a "Carnegie unit." Nevertheless, it is almost the only standard of measure possible for the service to which it is put, except the testing of the pupil himself. Any college-entrance official will welcome the substitution of more independent study and less of mere pumping and stuffing protracted to consume a forty-minute recitation period.

17. It is very desirable that children should look forward to the opening and backward to the closing of the daily session as the most interesting and attractive moments of daily life. This goes far to make the child love school and to secure promptness in getting there each morning. The dull moments between will be forgotten if the opening exercises are such that everyone is anxious never to miss them and the last period is reserved for a story hour, for happy discussions, or whatever will make the pupils truly sorry when the bell rings for dismissal.

Reflex influences. Finally, a prime essential of the schedule, as of every other device of school organization, is a plan that will force the teachers who tend to fall into ruts and work by rule of thumb to keep everlastingly thinking about the vital things of their work. Constant weighing of such considerations as we have enumerated above will go far toward making the teacher a directing overseer, a guide and counselor, a student of pupils' individual and group needs, rather than a mere routine lesson hearer. Monotony is banished and "dead time" eliminated if the teacher lives up to this opportunity. Pupils become conscious of the significance of what they are doing when time is adjusted to the thing to be done, instead of their being sentenced to hard labor for a fixed time, regardless of what is to be done. The various considerations which we have detailed at length cannot be met by an ironclad daily time-table. On the other hand, we cannot recognize too clearly that a school without a very clear-cut schedule faithfully adhered to will soon be chaotic.

The "elastic schedule." A simple elastic schedule, easily arranged, has been found to meet every consideration we have mentioned. It is made by dividing the school day into four to six large periods, not necessarily of the same length, each assigned to some subject or group of related subjects. All groups in the room work strictly within the prescribed field during the limits of a period. The period divisions must be violated only for most urgent considerations, with the exception that individual pupils may utilize *spare* time in any period for other tasks or for privileges approved by the teacher. The schedule may readily be modified from time to time as conditions seem to make this desirable.

Illustrative program. Following is a schedule successfully used by a teacher of two grades, the fifth and the sixth, each grade being divided into two shifting groups, A

and B. The groups varied from six to twelve pupils each. This specimen is selected because of the unusual difficulties which it meets. The program for an ordinary classroom with one grade of two or three groups is considerably simpler but follows the same plan of construction.

The time within the period divisions may be redistributed according to daily needs.

9–9.15 Opening Exercises.

9.15–10.10

Arithmetic (55 min.)

- 5 min. Assign problems to 6 A at seats; assign problems to 6 B at blackboard.
- 35 min. Develop new topic with 5 A.
- 15 min. 5 B recite on topic developed yesterday and studied during preceding 40 min.
  - (Following day 6 A has new topic in 35 min., 5 A recites 15 min., 5 B works at board, 6 B at seats.)
  - (On the next day, 6 B has new topic, 6 A recitation, 5 A at board, 5 B at seats, etc. in rotation as closely as the nature of the work permits.)
  - (In this room it is convenient to use the fifth day in each week for combining groups in review and drill work.)

10.10–10.50

Geography (40 min.)

- 10 min. Review 5th grade on essentials of yesterday's lesson and outline advanced assignment; 6th grade preparing.
- 30 min. Recitation or development in 6th grade; 5th grade studying.
  - (Reverse on following day.)

10.50–11.10

Singing (20 min.) — Both grades together, alternated with drawing, arithmetic drill, or supervised study period.

11.10–11.50

History (40 min.) — Reverse geography schedule for day.

11.50–12

(10 min.) — Spelling and penmanship drills for those below standard.

Recess

1–1.40

Reading (40 min.) — Period divided about equally between the two grades, not divided into permanent sections. Time varies with selection but is balanced from day to day. Once or twice a week all combine in some selection of interest to all.

1.40–2.35

Language (55 min.) — Division of period and rotation as in arithmetic. Composition usually instead of blackboard work.

2.35–3

(25 min.) — Hygiene, 5th grade, Monday and Wednesday; 6th grade study. Physiology, 6th grade, Tuesday and Thursday; 5th grade study. Current events, all, Friday.

At the beginning of each period and in daily assignments the teacher indicates in a word the order of taking up the work.

In geography, history, and reading the group distinctions are maintained by lateral extension mainly; that is, group A is assigned additional readings on which they report to the entire class, group projects in map-making, dramatization, or school-fair contests. The regular groups in these subjects may be retained where a teacher has but one grade. In singing, hygiene, etc. there are no group distinctions. Spelling and penmanship are conducted much of the time on an individual basis, the proficient pupils being excused for other work if desired. Manual training for the boys and domestic science for the girls are done in other rooms and take the place of one period each week. Drilling, dictating, and the inspection of work done at the board or at the seats is frequently done by pupils — with increased educative values.

Program for a small high school. Following is an adaptation of the same general plan to a small high school. The chief features of this schedule are the use of long periods and the combination of classes. One teacher can conduct

two small classes in Latin for seventy minutes and give to each as much or more actual instruction than could be given to them separately in ninety minutes or more. The subjects taught in the longer periods are not expected to be studied outside of this time except by the few who are backward, and they have one or two vacant periods during the day for study. English for Grade II and Grade III is distinct as to textbook recitations, consolidated as to theme work, and alternated annually as to literature, by which means the abundant equivalent of two forty-minute recitations can be accomplished in fifty minutes of the teacher's time. The science and history courses are consolidated outright, the courses offered being given in alternate years. On this schedule any pupil *can* take as many as six subjects in any year, but the majority should take but four and the more capable ones five, having one or two periods daily for study and a considerable range for election. As arranged, the course could be conducted by two teachers and half time of a third, though better instruction would be secured by having a more adequate force. Schedules for larger schools with ample teaching force require no special combinations.

	Grade	I	II	III	IV
9–9.15	15 min.	Opening exercises twice a week out of first period.			
9–10.30	90 min.	Math.	Math.	Latin	Latin
10.30–11.20	50 min.	History	English	English	Mod. Lang.
11.20–12	40 min.	English		Math.	
1–2.10	40 min.	Latin	Latin 5 da.	Science	
	30 min.		Latin 3 da.	Laboratory	3 days
				History 2 days	
2.10–2.50	40 min.	Lab. 2 da.		History 3 days	Math.
2.50–3.30	40 min.	Science		Mod. Lang.	English

Unlimited adaptations and variations of the principles of this schedule are possible.

A Montessori program. An illustration of the modern trend away from rigid divisions of the day into short periods is shown in the daily program under which Dr. Maria Montessori conducts her celebrated *Casa de Bambini* at Rome. This is the daily schedule as given in the bulletin of the national Bureau of Education, by Anna Tolman Smith:

Opening at 9 o'clock. Closing at 4 o'clock

9–10. Entrance. Greeting. Inspection as to personal cleanliness. Exercises of practical life; helping one another to take off and put on the aprons. Going over the room to see that everything is dusted and in order. Language: conversation period; children give an account of the events of the day before. Religious exercises.

10–11. Intellectual exercises. Objective lessons interrupted by short rest periods. Nomenclature; sense exercises.

11–11.30. Simple gymnastics: Ordinary movements done gracefully; normal position of the body, walking, marching in line, salutations, movements for attention, placing of objects gracefully.

11.30–12. Luncheon. Short prayer.

12–1. Free games.

1–2. Directed games, if possible in the open air. During this period the older children in turn go through the exercises of practical life, cleaning the room, dusting, putting the material in order. General inspection for cleanliness. Conversation.

2–3. Manual work. Clay modeling, design, ètc.

3–4. Collective gymnastics and songs, if possible in the open air. Exercises to develop forethought; visiting and caring for the plants and animals.

The Gary program. Perhaps the most significant radical improvement in the matter of daily programs is that evolved by Superintendent Wirt at Gary, Indiana, and known as the Gary Plan. This plan has attracted attention primarily as a means of getting larger service from the school plant by means of having several groups of children use the same rooms and equipment in rotation. The importance of such

a plan in the crowded schools of the larger cities resulted in Mr. Wirt being invited to inaugurate his plan in some of the New York City schools. It has also been approved for nation-wide adoption in Japan. Under the Gary Plan the work of the school is divided into four departments: namely, Department 1, consisting of language, mathematics, history, and geography; Department 2, science, manual training, drawing, and music; Department 3, auditorium exercises for mass instruction; Department 4, play, physical training, and application by means of free activities. The children of the school, likewise, are divided into four sections or groups: one half of all the children in Grade I to Grade IV constitute group A; one half of Grade V to Grade VIII constitute group B; the other halves of these grades respectively constitute groups C and D. The school day is long, eight and one-fourth hours for most of the pupils, and is divided into eight one-hour periods. The groups pass in succession through the several departments of work about as follows:

Time	Department 1	Department 2	Department 3	Department 4
	Group	Group	Group	Group
8.15– 9.15	A	B	—	C, D
9.15–10.15	B	A	C	D
10.15–11.15	C	D	A	B
11.15–12.15	D	C	—	—
12.15– 1.30	A	B	—	—
1.30– 2.30	B	A	D	C
2.30– 3.30	C	D	B	A
3.30– 4.30	D	C	—	A, B

Roughly speaking, each classroom can accommodate four distinct groups of children each day, thus multiplying the capacity of the school by four, provided that separate equipment is supplied for each of the four departments of work. Practically there are many limitations on this quadruple

service of the buildings, but there are also many interesting and advantageous variations on the plan as it has been briefly and incompletely outlined above.

PROBLEMS

1. What is the practical difference between being *tired by* a task and being *tired of* it?

2. Do children show any less capacity for mental work toward the close of a school day, provided they are equally interested and have sufficient exercise and air?

3. Criticize on both hygienic and pedagogical grounds several daily schedules in actual use.

4. Arrange better schedules to meet the same conditions.

5. Arrange a schedule according to the principles in this chapter for a three-year high school with two teachers.

6. Study the Gary Plan with a view to determining to what extent the idea of rotation could be adapted to relieve the crowded condition which might prevail in any department of a school; for example, the manual-training shops or domestic-science kitchens.

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CHAPTER XVII

HOME STUDY AND STUDY PROGRAMS

The indictment of home study. The schools gradually drifted into the custom of expecting their pupils to do considerable studying out of school hours. Of late there has been much agitation in medical and educational circles, as well as in the popular press, on the inadvisability of such requirements. Objections raised to home-study requirements may be summed up thus:

1. There is danger to the health of a pupil who works through the school hours and in the evenings too. Six hours of hard mental work is all that should be required of a growing child. Study which interferes with abundant sleep causes incomparably more harm than benefit to school progress.

2. Long hours are conducive to bad habits of dawdling over work both at school and at home. Study periods at school become occasions for mischief and those at home for trifling. The maximum efficiency and the best mental habits result from a few hours of concentrated attention and high-pressure work, with complete relief at other times.

3. The amount of time devoted to lessons at home cannot be controlled. Some children need much more than others to accomplish the same task. Where departmental teaching prevails, as in high schools, ordinarily each teacher makes his assignments without reference to others. One night the child will have very little to do, while each of four or five teachers may require an extra task the next night. Inquiry among the teachers of a certain group of

high-school pupils disclosed the fact that collectively they were expecting from six to eight hours of study from these children practically every night. Each of these teachers had indignantly denied that he was overtaxing them in his department and was astonished at the combined results.

4. Study in some homes is done with bad lights and such discomforts and distractions as to be more harmful than profitable. In the better homes there is often very much of "helping" of the misguided sort, which is worse than none at all, upsetting plans for training in study and deceiving the teacher utterly as to the child's effort and achievement.

5. "Lessons to get" is made an excuse, valid or not, for evasion of home duties, church attendance, and other responsibilities which are, up to a certain point, no less educative than school duties.

6. Home life, which Americans regard as the basis of that which is best and purest in our civilization, is largely destroyed. From the time the child is old enough to sit up at night the long winter evenings mean to him not the beautiful ideals of hearth-side and home circle, but the hardest and most uninspiring tasks that he will probably ever know. Might not some of our social problems be very much alleviated if the demands of the school did not make impossible the fine influences of uplifting memories and ideals of sweet home life?

7. By this relentless grind, day and night, childhood is made abnormally severe, and no opportunity is given for training for the intelligent enjoyment of culture and leisure.

Its regulation. In recognition of these evils, home study has been quite generally abandoned for primary children, and the amount required for the intermediate grades is reduced. In not a few instances the requirement of home study for any grades has been prohibited. Elsewhere

graded schemes of requirements have been made. For example, in one place a half hour was prescribed for the third and fourth grades, an hour for the fifth and sixth, an hour and a half for the seventh and eighth, and two hours for higher grades. Since one child can keep up without any home study, while another cannot with twice the designated time, the fallacy of any such prescription must be obvious. Studying by the clock is poor business anyway, as is any pretense of study when nature demands that the child should be in bed.

Study programs. A plan which evidently eliminates some of these evils is the study program. As used in Oakland City, Indiana, each child is required to make out a complete schedule of all time which he is to devote to school tasks, including the periods when he is not reciting at school and the study time at home. This plan is reported to have established regular hours and regular habits of study and to have "practically eliminated the problem of discipline." The pupils themselves, after two and a half years of working by a study program, reported as follows: "When following a study program one is never in doubt about what to do next"; "I can do more and better work than if I studied in a haphazard fashion"; "It keeps me from spending too much time on favorite subjects"; "Keeps me from changing tasks when I begin to tire of what I am doing"; "I not only have better lessons but also have more time for leisure"; "It proved so beneficial to me in the preparation of my lessons that I now follow a regular program for all my work"; "I had the habit of always putting off my work until I felt just right for study, and as a result made very poor grades, but since I have adopted a regular study program my interest in my work has greatly increased and I am no longer ashamed of my grades."

In carrying out this plan each pupil is supplied with a card containing on one side blanks for his schedule to be filled out by each child to suit his own needs. It is made out for the term and a copy filed with the principal. Presumably it may be adjusted from time to time as the pupil finds readjustment advantageous. On the reverse of this card is printed the following:

DIRECTIONS FOR STUDY

1. Follow your program regularly.
2. If possible, study your lesson immediately after the assignment is made.
3. Take brief notes and afterward study by outline.
4. Use dictionary and reference books for points not clearly comprehended.
5. Concentrate the mind so that outside interests will not frequently disturb your study.
6. Do not try to commit exact words until you understand their content.
7. Connect important facts of the new lesson with facts previously learned.
8. Make comparisons and contrasts when possible.
9. The extra effort spent on preparation pays the greatest intellectual dividend.
10. Carefully review and think over the previous lesson before beginning the next.[1]

Double periods. Another plan was developed at Newark. The school day has five main periods of sixty minutes each.

The first portion of the period is spent in recitation. The second portion is employed in conference or independent study with the teacher, the children being in the atmosphere of the subject. It gives the instructor a chance to know that each child is studying his special subject, as well as to observe and direct the methods

[1] See Reavis, *School Review*, June, 1911.

of study. The teacher who knows the subject, working with the children, can give them some of the trade secrets for handling the same. He shows the pupils how to study and how to form correct study habits. This well-directed functioning power leads the pupils to confidence in self and to personal initiative. . . . Concentration and intensive effort in study, influenced by the aura of the inspired teacher, is the outcome of the system.

After-school periods. In the hour following the regular school session the teachers are at their desks to confer with the pupils who may desire instruction or wish to study after school. By this plan it is claimed that practically all the dangers inherent in home study have been eliminated. Home study itself is minimized or eliminated for the bright pupils.

Segregated study plan. The elastic schedule already discussed includes the essentials of these plans as regards the work in school and may be combined with the out-of-school features to advantage. In connection with it there has been developed a policy of confining the study of the "form" subjects requiring the most intensive study to school hours and segregating for home work the less formal study of cultural subjects. This plan seems to meet every objection offered to home study and at the same time utilizes the evening hours most profitably for the student's progress. The plan is as follows, subject to wide variations.

"Form" subjects. Time is provided in the daily schedule for the study required in the formal subjects (mathematics, spelling, grammar, Latin, etc.), as far as possible under the direct supervision of the teacher. This is done either by means of the long periods in which study and recitation are combined or by means of special study periods.

Individual needs. In the high school, where shifting groups do not provide for varying abilities, the slower pupils can secure additional time in school for study by taking fewer subjects and the more rapid pupil can economize time by

taking additional courses. The daily assignment is what the average of the class can accomplish in the time allotted, and, as the study is done under the eye of the teacher, he soon knows how to gauge his requirements to the ability of the class. A deficient pupil may use out-of-school time to remedy some individual need which has been pointed out to him, or an ambitious one may carry extra courses or get ahead of his class by home study in the formal subjects, but the regular policy for all is to regard the hard, grinding subjects which require intensive application as school work, to be finished during school hours and put aside with all worry about them at the end of the school day.

Concentration during work hours. Emphasis is placed on the value of hard concentration during the few hours at school, and there is no pretense of it at other times. There must be no evening study required at the expense of complete relaxation and untroubled sleep. The one unfailing requirement of the child at home is to keep himself thoroughly fit for a hard day's work at school. He can get all the hard work there that is good for him.

Knowledge and culture study. The study which is segregated for the evening hours at home is that kind which is introduced into the curriculum primarily for training in the fine art of the cultured use of leisure hours. The universal tendency under ordinary conditions has been just the opposite of that to be desired. The formal studies, which require concentration, have been the ones which the children have taken home for night study; while the cultural studies, — literature, history, and geographical readings, — because they were easier, have been left for the odd times between classes at school.

Latitude in home-study requirements. Assignments for evening work are made in as broad a manner as practicable, allowing considerable latitude as to the time at which it is

to be done. This is to allow freely for attendance upon church meetings, lectures, concerts, and the more wholesome social gatherings and other entertainments suited to the age of the children. Children cannot learn to select the right sort of amusements in preference to the wrong sort by being kept away from them all. Definite effort should be made to interest them in the best forms of entertainments, and lessons should be so correlated that pupils will be brought into sympathetic appreciation of the finer opportunities for recreation. This may well contribute more to good living than a considerable amount of class work.

Training for leisure. The actual study to be done at home should be planned to guide the children into an abiding interest in the reading of such history, travels, and literature as contribute to lives of refinement and culture. It should be correlated in an interesting manner with the news of the day and should lead to the reading of the better grade of daily papers and magazines at home. It should make intelligible and attractive the better class of music, now accessible in almost any home by means of the graphophone. It should direct the pupil's steps to the galleries and museums, where things worth while are to be seen. Above all, it should lead into the enjoyment of the best literature — not necessarily the best for the teacher of literature but the best for the child. This direction can be given to the home study by dealing with these subjects of culture and general knowledge in a more vital and less formal manner.

Contributions to home life. For countless thousands the whole home life would be beautifully enriched if the teachers in selecting the study for evening occupation would find those things into which the whole family might enter. The family circle and its interests might well be built about the interesting lessons of the school. In the more intensive studies home help is commonly a hindrance to the child and

a burden to the parents. In culture subjects it cannot but prove a blessing to both. Stories of the people who lived in that mysterious long ago, geographical readings of the wonderful lands and strange peoples we have never seen; pictures and descriptions of those distant places where the news of to-day actually took place; the stories, the poems, the masterpieces of every kind that the world has enjoyed and admired; why should not these be the history and geography and the literature lessons that we assign for home study? These studies are intended to adorn life and to elevate our interests; why defeat their purpose by reducing them to a few minutes of hasty cramming in of facts and drilling in of outlines? We may well keep the organizing of them at a minimum and the enriching of them at a maximum. We may introduce as much of formal instruction and system as need be in the recitation work or look to other subjects for disciplinary values, but the surest way to secure future enjoyment of refinement, leisure, and higher standards of intelligent home life is to make them enjoyable now.

School will much more wholesomely prepare for and approximate real life when a faithful day's work earns a free evening; when in business hours we make our living, but after hours we do our living; when the day's work keeps us apace with our fellows, but wise and self-directed use of spare hours is the means by which we outstrip them; when the routine things of life are locked up in our desks at the close of the day and we take home with us those that we may well share and enjoy with the family; when for our evenings we can enjoy together the best things of music, literature, art, and society.

The argument that home assignments of a definite and compulsory sort serve a good purpose in keeping the child off the street and out of bad company is not only a slander on American homes but is fallacious from the fact that

months of dead evening grind in the hardest of study through the school term is the surest means of driving the child from the home during the evenings of vacation and holidays. Training for home life must begin at the school which has done so much to destroy it.

Happily the introduction of these better plans of home work and policies of study do not need to wait for some general "adoption of a system." In fact, a system *adopted* would be foredoomed to failure. But every teacher can enter more or less completely into the spirit of the situation and thus work out his solution of the home-study problem step by step without waiting for formal action.

PROBLEMS

1. What instances can you cite of injury to health from home study?

2. Find from the several teachers of any high-school class how much time they expect the pupils to spend on their work out of school. Find from as many as possible of the pupils or their parents how much time they actually do spend on it.

3. From observation and inquiry try to determine about what per cent efficient is the evening study of several children, especially after they begin to nod.

4. Prepare a practical study program for yourself or some student.

5. Under the plan of segregating the formal subjects for study wholly in schools, prepare instructions to children indicating what work is to be done in school and what at home.

6. Outline the assignments in literature or history for a month with the aim of making the home study as vital as possible for the child.

7. Plan suggestions as to how an uncultured family could share in the benefits of the child's work at school. How could you present these suggestions in class tactfully?

8. Analyze the usual effect of "home help" in arithmetic or Latin lessons. What are the objections to it? Do the same objections prevail as to help in studying a piece of literature or an historical description? What are the effects of parents working with the children on such assignments?

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CHAPTER XVIII

GETTING STARTED RIGHT

Readiness of the teacher. It is to be expected that young teachers will be in some confusion as to what to do first in beginning the work of the school, but the delays in getting down to effective work in very many schools indicate that older teachers generally would profit by giving considerable thought to the problems of the first day. Certainly one's personal affairs should be settled and well off the mind *before* the opening day; such things as boarding arrangements, unpacking, and "getting straightened out." Several days devoted largely to making acquaintances and getting to feel at home is more than worth while when going among strangers to teach.

Readiness of the plant. Whatever the size of the school, whether a one-room country school or a unit of a big city system; whatever the amount of janitor service and supervision of buildings provided, the principal in charge must make himself thoroughly familiar with every part of his school plant in advance of the opening day, and long enough in advance to see that all necessary repairs and attention are provided in time. What the janitor or trustee was supposed to have attended to does not help the disorder of the opening days. Necessary repairs, equipment, and cleaning must all be disposed of before the children begin to demand attention. The principal can afford to trust no one but himself in knowing that things are in shipshape for a successful start. Likewise each teacher should give personal and very careful attention to every

detail of the preparation and equipment of his own classroom. The first days are to be the busiest and most critical of the whole year, and the wise teacher will not permit himself to be placed at any disadvantage for the lack of foresight in the matter of having things ready. There must be no getting ready for business after business is supposed to have begun. Where janitor service is not adequate it is an admirable plan to make special friends of a few of the leading spirits among the pupils and go with them to make the necessary preparations.

Class rolls. All teachers should secure some days in advance the complete lists of the pupils who have been promoted to or detained in the grades they are to teach. New pupils, as far as practicable, should also be assigned to their grades, permanently or provisionally, before the first morning of the term. Daily schedules, signals to be used, routine of class movements, disposition of wraps, etc. should all be planned as completely as possible and thoroughly understood by every teacher.

Course of study interpreted. Whatever the form of the course of study provided, before the first day the teacher should have taken time to interpret it broadly into large central aims and the general abilities assumed and sought for in each grade. A characteristic of poor teaching is that real aims are lost sight of in the crowded trivialities of the daily assignments. By getting the large aims clarified in advance and the general organization of the texts thoroughly in mind, one's work comes to have much more significance, and methods less of stupid inflexibility. After the burden of the daily grind begins to press, it is hard to think in terms of large aims or to distinguish from the incidental that which is essential.

First impressions. First impressions are too important among the educative factors in the children to be neglected.

The first impression that is most valuable for teaching or for discipline is that the school is a place for business. However eloquent the new teacher may be, it is not probable that an inaugural address will contribute much to the success of his work. His ideas and his phrases may be perfect, but what he says will have much less effect on the pupils' attitudes than what they do. It is better for the children to feel that they are being put through their paces than that the teacher is. The formal promulgation of rules and policies serves as a challenge to the children to try out the strength of them. Telling about it is a futile way to create the impression that the school is to be a hive of busy activity. The more effective way is to have everybody busy, starting on the jump when the first assembly bell rings and keeping it up until the regular time for dismissal. Authorities have a right to question the management of a school which requires three to ten days to get down to regular work. During these first days pupils adopt their standards of application and industry for the year. Some of the frenzied hurrying to get over the ground in the last week before final examinations should be avoided by a systematically busy first week. But a quick get-away requires a thorough getting ready.

Work of the first days. The first days should be particularly important days of actual teaching. Lack of books, instead of being a valid excuse for early dismissal and getting nothing done, is a distinct teaching advantage. It is not book assignments that are needed for the first week or two, but a thorough reviewing and fixing afresh of the essential fundamentals already learned and assumed as a basis of the new year's work. Instead of starting off with new work and excusing one's failures all through the year by reflections on the poor preparation which the class received under the former teacher, one should spend a few days in

testing out the abilities expected of the pupils, refreshing the class on that which has become stale during vacation, discovering individual deficiencies, and directing the necessary drill to remedy them. Nor are the books of the last year necessary, for that which is important is not a reciting of newly studied lessons but a demonstrating of abilities which can be used in connections different from those in which they were learned. Work of this sort has a distinct value in the fact that it focuses attention of teachers and pupils alike upon essentials; it should make perfectly clear what sort of things are indispensable and thus serve as a guide to more effective subsequent study. It should help them to realize that the effort worth while is not getting over specified ground but establishing permanent abilities to do definite things.

Not too many changes. However radical the changes that are to be made in the routine and management of the school, it is not well to present too many reforms to the pupils on the first day. Let established habits furnish a working basis to start on and introduce changes gradually. Let each change have the attention of the children and become fixed as a reality and habit before others are too much talked of. Distinctly bad habits, to be sure, consciously low standards of behavior or of cleanliness, and the like, should not be allowed to reëstablish themselves after the break-up incident to vacation. Begin with the best that the pupils know, but do not dissipate attention with more reforms than they can appreciate or live up to.

Study habits. It is a safe assumption that some of the very worst habits of the class are habits of study. Make the first few days contribute to better ideals and standards of work. Impress upon pupils the value of thorough methods of study, not as arbitrary tasks imposed but as labor lighteners, as means of getting done most easily the

things that will have to be done some way. The reviews of these first days afford the best object lessons for just such teaching of study methods. Keep before them the thought that quality rather than sheer quantity of study gets results.

A clean slate for a bad record. A very large contributing factor in the conduct of the chronically troublesome child is the notion he gets that the teacher has "got it in for him"; that once a teacher is "down on him," whoever may have been at fault originally, he is suspected of all the misdoings that occur and never has a "square deal" again. It is the tragic fate of the criminal in miniature. The boy must feel that so far as the teacher is concerned he has an entirely new chance each term. It is even best for a new teacher to take charge of a class without knowledge of past conduct records, so that preformed suspicions will not tinge the most impartial treatment with any insincerity. The child "with a record" is always suspicious of being suspected. However, if a trouble-maker is known and knows that he is known, it is well to win him over at the start. Forestall mischief by making him your friend. Call on him for genuine assistance of any sort that a child is glad to render in the days before and just after the opening of school. Trust him with important commissions and responsibilities and keep him busy working *for* you. Nothing so calls forth the best impulses of boy nature as confidence and friendship. One who habitually hates any embodiment of authority will nevertheless stand by a friend.

Getting in tune for the day. Much of the success of each day, as well as of the year, depends on a good start. The refreshing night's sleep, the invigorating bath and the nourishing breakfast, all the wholesome routine of the resting hours and the rising hour, contribute largely to the day's work, and the wise teacher will not neglect these factors in

his pupils' progress. Control of them is through *inspiring* instruction in hygiene, friendly counsel, and coöperation with the home. But given the right physical start, it is no less important that the intellectual and emotional side of the pupil should be "feeling fit." Great speeches are made, great poems are written, great battles are won, and most other great things are done in times of enthusiasm and inspiration. But the inspiration is not often an accident; it is designed, planned, and worked up to. So the good day's work needs an emotional stimulus, but the way to get that stimulus is to go after it. Not merely a stimulus but a neural harmony, a mental attuning, a spiritual poise, is needed. Some of the class are sure to bring something of fretfulness, discouragement, or other inner discord from home — and emotions are contagious. Morning exercises should seek to smooth away the friction, to afford a balm for the irritation, and to set discordant nerves in tune. "Music hath charms to soothe the savage breast" in school as well as elsewhere.

A moment of reverence. A moment of genuine reverence helps decidedly to give one a renewed sense of values; it shows up mean thoughts in their true aspect; it cleanses ideas, uplifts ideals, and helps to re-aline one's aims and efforts with purposes that endure. He is fit for a bigger and a better day's work who for even one instant has bowed his head at the beginning of the day and sincerely said: "Father, help me to live this day aright." A habit of beginning the day in such manner has value beyond computation in fitting a child for useful citizenship, for right living and effective work.

Devotional (?) exercises. The customary "devotional exercises" at the beginning of the school day have aimed for such results but, like much other formal worship, the means have defeated the end. They have been anything but exercises in devotion. Long Scripture readings and perfunctory

saying of prayers or droning of hymns while the children are making faces, passing notes, or doing anything but praying and praising — this hideous mockery has been the daily inspiration of some school openings. Such sacrilegious performances violate the fundamentals of both religion and pedagogy. It is not surprising that protests against the use of Scripture in school have been raised by atheists, Jews, Catholics, and zealous Protestants alike, — some because they regard the Scripture as unworthy to be taught in the school and some because they regard the schools unworthy to teach Scripture.

State laws vary in their attitude toward religious teaching in school, from that of some of the eastern states where the reading of a portion of the Bible and repetition of the Lord's Prayer is required daily under penalty of removal, to that of some of the western states where the conducting of any religious exercise in school is prohibited under penalty of the revocation of the teacher's license. Much heat of intolerance has been generated by this question in various states, and it is a familiar case in the records of civil and educational courts. Despite local variations, the trend of decisions and of legislation is toward a quite definite American ideal, which may be expressed about as follows: There shall be no sectarian instruction of any sort given in any school maintained by public funds. There shall be no religious test or examination required of any teacher, but no teacher shall be allowed to wear any distinctive sectarian garb or engage in any distinctive sectarian exercise while at school. The Bible may be read and the Lord's Prayer repeated, but no pupil whose parents object may be required to participate in or attend such exercises. The Bible may be used as literature or as historical material, provided no pupil shall be required to study it in opposition to the declared wishes of his parents.

Their aim. This is a happy conclusion and should in general result in making the public schools more and not less religious. That teacher whose religious services must be either of the offensive sectarian sort or of the mechanical perfunctory sort would be much more reverential in omitting them entirely. It is not the *responsibility* of the public school to supply the child's religion any more than to buy his shoes, but it is the highest *privilege* vouchsafed to any human being to lead little children into reverence and spiritual aspiration.

Bible as literature. So far as we defend the use of the Bible as literature, let us teach it in the literature class as literature. If as history, teach it in connection with history. These considerations have nothing to do with its use in devotional exercises. If used there, it has but one sort of justification — that it contributes to reverence, spiritual uplift, ennobling of life.

Routine or reverence? Whatever else in the school may be routine, devotional exercises must not. Routine saves time, saves energy, insures uniformity, but eliminates emotion and conscious attention. Routine and inspiration are psychologically opposite. Morning exercises, so far as they may be religious, should keep attention and the appropriate emotion at a maximum. Emotional states are the accompaniment not so much of instruction as of action. For reverence there should be a simple act of bowing the head or kneeling accompanying a devotional thought; a sentence prayer for guidance, for higher aims or for kinder feelings; a formulation of childhood's purest aims. A single thought, but that made vital, is better than more. Bible reading may well be of the same sort — one fine thought expressive of a child's spiritual aspiration, a proverb of admonition, a glimpse of the inner life which has made Scriptural characters immortal, or one sweet strain from the Psalms. Even bigoted

parents raise no objection to such devotions nor do they care as to the creed of the teacher who so teaches reverence. It is not necessary that these exercises be conducted every morning or at any regular time. What is necessary is that when they are conducted they be participated in reverently by those present.

Singing. Music is a fundamental expression of human emotion. Singing by a school in unison, like marching or other concerted rhythmic activity, arouses an *esprit de corps* which means much for coöperation and easy discipline. The primary essential is not so much that the tune be accurately sung but that everyone take part. Artistic and harmonious music has a large place in the better life, but when it comes to getting a school in tune for the day's work, the joyously abundant rhythmic activity of all in unison is the thing that counts. Being able to sing and to lead singing should be as much a part of the teacher's work as being able to read and to lead reading. One who "cannot sing" should, by his example, make use of the fact to encourage the pupil who thinks that he also cannot sing to join in freely with the others in all concert singing. The adolescent boy has great need to get control of his rapidly changing emotions and physical capacities and to subject them to social standards and usages. His changing voice is among these yet uncontrolled forces, and the school song is among the finest means of socializing both voice and boy. The singing, of course, must not be forced upon him, but it is a great thing to inspire such a boy with the spirit of song. School singing, expressive of school spirit and child life, is a very different thing from singing lessons and should not be dependent upon instruction. The former is related to the latter much as animated conversation is to a grammar lesson. Patriotism, loyalty, school pride, and every social quality appropriate to childhood can be contributed to by means of school singing.

SOCIALIZED MORNING EXERCISES

Two scenes from "Brotherhood," a play written and staged by the eighth grade for the Francis W. Parker School

Educative and socializing exercises. Devotional and musical exercises should be very brief, particularly if frequent, but the range of exercises appropriate for the opening of the day is practically infinite. "School hour" may be conducted occasionally for the general discussion of any questions for the good of the whole school, as to its internal organization, standards of conduct, physical environment, or interscholastic contests. Current news and movements of local importance may be effectively presented; public issues which press and people are discussing, anniversary celebrations of local and general importance, worthy causes for which unselfish propagandists are seeking to develop a public consciousness, or the frequent relief funds for which public contributions are asked. It may not be desirable that the school should directly collect funds for many of these causes, but the nature of the cause or the need may well be made clear to the children. Any of the minor "special day" celebrations may be condensed into morning exercises. Special music, talks of an interesting sort by teachers or visitors, may occasionally occupy the morning-exercise period, but it should not be regarded as a time for addresses. It is rather an opportunity for coöperative activity. Methods for making it such and an abundance of illustrative material have been admirably set forth in various publications. The Second Year Book of the Francis W. Parker School, entitled "The Morning Exercise as a Socializing Influence," gives "Historical Methods in Arithmetic," "The Great Ice Sheet," "Cicero," "A Study of Bridges," "The Chemistry of Water," as some of the striking topics presented at this school by some of the classes in morning exercises. Literary, musical, or dramatic entertainment of the whole school by various grades or special groups in rotation is a most effective means of keeping the interest in these occasions at a

maximum. The educative value to the group presenting such an instructive exercise, as well as the socializing value to the whole school, is beyond calculation. A good specimen of group work of this sort is the little play, "Brotherhood," written by an eighth grade of the Francis W. Parker school on the theme of the Peasant Revolt of 1381, which they had been studying. The children conceived the characters and situations, wrote the lines, arranged the scenes, and staged the play as a morning exercise for the school.

From the Year Book mentioned above we quote:

> The morning exercise is a common meeting ground; it is the family altar of the school to which each brings his offerings — the fruits of his observations and studies, or the music, literature, and art that delight him; a place where all coöperate for the pleasure and well-being of the whole; where all contribute to and share the intellectual and spiritual life of the whole; where all bring their best and choicest experiences in the most attractive form at their command.

PROBLEMS

1. Prepare a detailed plan for keeping the pupils of a given room busy for full time the first three days of the session, assuming that they are not provided with books for advanced study.

2. List the changes you think you would make in taking charge of a given school and indicate which of these you would attempt to inaugurate on the first day.

3. Indicate what you think a new teacher coming into your community should do with reference to getting started right with certain bad boys that you know.

4. Plan several opening exercises for the whole school along different lines, as (*a*) devotional, led by the teacher; (*b*) musical, by the teachers and outsiders; (*c*) dramatic, by the fifth grade; (*d*) current events, by a seventh grade; (*e*) musical and literary, by some high-school group; (*f*) historical, by some group of pupils; (*g*) by some business or professional leader or representative of local government.

READINGS

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Dinsmore. Teaching a District School, chap. i.
George. Character Building, Vols. I and II.
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Lincoln. Everyday Pedagogy, chaps. v, viii.
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The Religious Education Association, Proceedings Second Annual Convention, Parts VI and VII.

CHAPTER XIX

ROUTINE

Pros and cons. We are told that "There are at present two opposing theories of school management. The advocates of one theory protest against anything that resembles a military organization of the schools. The advocates of the other theory favor some measure of reversion to the old-time-school fashion of rigid discipline and machine-like organization."

Arguments in behalf of the one theory or the other are on a par with the classic rural debates on whether the horse or the cow is the more useful animal to man. The "horse-ites" and the "cow-ites" were no more determined in their battle array than have been some of the advocates of "perfect machinelike organization" in opposition to the advocates of "spontaneous individual initiative." Similarly we have had the contentions of the "word-method" advocates versus the "sentence method"; the "Grube method" versus the "Speer method"; and in every aspect of education we have had these contests between those who insist that all is black and those who hold that all is white. The truth, of course, is that the horse is better for driving and the cow for milking; that sentence reading accomplishes some things, word reading some others, and phonic and literal analysis of words some other things. Some things are black, some are white, some are both, and some are neither.

So, in school management, mechanical routine is just as essential at times as its absence is at other times. It is not a question as to whether we will build by the hammer

method or by the saw method. When we need to drive nails we will use the hammer, and when boards are to be cut off we will prefer the saw. In all life economy there are many things to be reduced to routine and habit as quickly and as completely as possible. There are other matters which can be intelligently dealt with only by constant attention and judgment — the antithesis of habit. Habit effects the same marvelous economies in the life of a school group that it does in an individual. There is the same need for and the same value in class routine as in personal habits and the same laws of habit formation prevail.

Function of routine. The practical question for the teacher is, What activities should be reduced to routine? Manifestly, all those which are to be frequently repeated in an identical manner — those in which there is no varying question as to what is to be done or how it is to be done; in which the best method may be determined once for all and subsequently it remains but to repeat the process with the least expenditure of thought or time.

Furthermore, it should be understood that wisely imposed military routine does not lessen the initiative or moral responsibility of the pupil. Neither is there a tendency for all management to become mechanical because some aspects of it are reduced to routine. The effect of habit in life economy is to relieve the judgment from the supervision of fixed details that it may be free to direct the changing factors. So wise routine releases the attentive judgment of teacher and pupils for higher matters. Judgment cannot be everywhere. *If perfunctory matters are not reduced to routine, matters which require judgment will inevitably become perfunctory.* Human nature has ordained that both habit and judgment *will* function in the determination of conduct. Efficiency must see to it that each serves *where* it is most needed.

The problems of organization, grouping, promotions, grading, and schedule, already discussed, involve certain varying factors as we have seen and their purpose is defeated by mechanizing them. Routine problems, dealing with constant factors, are such as the passing in and out of classes, passing to the blackboard, collecting and distributing wraps, papers, books, or pencils; keeping desks and room in order, etc. Such things should require no judgment or attention from teacher or pupil, except to establish the routine method of doing them and to prevent any variation from it.

Laws of routine. The following well-established laws of habit apply fully to the establishing and maintaining of routine:

1. In establishing the habit or routine it is essential that the learner have a *clear idea* (*a*) of the thing to be done; (*b*) of the reason for doing it — and this should be one that appeals to him as a sufficient motive for doing it; (*c*) of the best way of doing it.

2. There must then be the *performance of the act* (*a*) with entire *attention* to the process; (*b*) with complete *accuracy* in every detail, defects being noted and eliminated at each repetition.

3. As mechanical accuracy increases (*a*) *effort will decrease*, and (*b*) *attention should and inevitably will disappear.* The goal is *automatic action with unfailing precision.*

4. It is essential (*a*) that the process be invariably the same; (*b*) its parts in the same sequence; (*c*) that attention be recalled to rectify any variation or inaccuracy which may occur.

Let us apply these principles to a concrete and typical case of initiating routine — the matter of passing notebooks or exercises.

An illustration. Allow the children to bring up their papers once or twice without plan. Return them in the

same unorganized manner. Note the total time consumed. Have the pupils multiply the number of minutes thus used by the number of members in the class, and that product by the probable number of sets of papers to be taken up and returned during a week, and that by the weeks in the session. This total will in some cases amount to the time of the whole class for a week or of a single individual for an entire school year. Considering the irritation and confusion and the loss of the teacher's time in handling the papers, such results do not exaggerate the facts.

Now let the class, thus vividly conscious of the need, propose better plans and after full discussion try out that which they prefer. With just a little guidance by question and suggestion they will hit upon the best. Every pupil must fully understand the plan. For example, this may be the plan decided upon. Each pupil at the left of the room passes his paper to his neighbor on his right, *face up*. This pupil places his own *on top*, *face up*, and passes the two to his right-hand neighbor, who also puts his *on top*, *face up*. This is repeated until each pupil in the right row has all the papers from his line in the order in which their owners sit. The rear pupil of the right row then comes forward with his pile, face up, and each right-end pupil puts his pile *on top*, *face up*. The teacher checks them through, turning each face down, then inverting the whole pile they are exactly in the original order. They are then returned by a pupil passing to each right-end pupil the number of papers belonging to that row. These take their own from the top and pass the pile to the left.

After a very few trials the largest class can collect or distribute the papers in half a minute without stopping the recitation to do it.

While the practice is going on and all are paying attention the process becomes beautifully quick and efficient. But next

day or next week someone will not be quite ready when the signal to pass the papers is given. One faces his paper down or puts it beneath the pile as it passes or carelessly drops the pile. A half minute to two minutes is lost to every member of the class because some one individual did not do his part well. Twenty to sixty minutes is lost to the group — but a forceful lesson on the meaning of coöperation is taught.

Results. After a few days the process is automatic. Some of the results may be summed up thus :

1. A large amount of time actually saved during the year.

2. An orderly spirit which contributes to good discipline and avoids many of the beginnings of trouble.

3. Genuine pleasure to the children, who always enjoy a certain amount of military routine.

4. A certain *esprit de corps* arising from good teamwork. These two values (3 and 4) are especially noticeable in marching.

5. Most effective training in coöperative self-government.

6. An object lesson in the origin and value of law and civic government. A miniature but genuine society in which is demonstrated the importance of every member doing his part faithfully, the interdependence of the individual and the group, the meaning of good citizenship.

7. Development of the pupil's initiative and judgment in planning in a large, unselfish way for the welfare of the group as a whole.

8. An object lesson in the psychology of habit formation which, under the teacher's further guidance, may be transferred as an ideal to many study habits and life problems.

Pupil initiative. Next *let the children select other school processes* which ought to be reduced to mechanical routine. Their free discussions will soon fix upon those activities which should be mechanized and distinguish those which cannot or should not. They will determine with much

ingenuity just the series of movements which should enter into each process to make it most economical and efficient. They will readily appreciate the laws of habit formation and come to apply them consciously. The objections that mechanical organization disregards the individuality of the child, that it is imposed from without, that it discourages spontaneous effort, or that it is the antithesis of judgment, are all meaningless when routine is thus established *through* the initiative and judgment of the pupils.

Children are equipped with all the powers of judgment and all the desire for social welfare that routine affairs of school life demand. If the class has not had experience of other than monarchical government, they will need caution against going too fast and attempting too much. The teacher's broader view may well steer the discussions away from wrong conclusions without actual intrusion, but the principle is valid that nothing should be told them that they can reasonably find out for themselves. As in teaching arithmetic, it is better that they should try out a wrong method and prove that it is wrong than to accept a better one unchallenged on authority.

The educative values of orderly debate — consulting together under parliamentary restrictions for the general good — will be readily appreciated. The genuineness of the debate and the sense of responsibility are far more important than the remote chance that the teacher may have a better plan of the routine than the children can reach with the aid of his occasional hints.

Persistency. It is not well to attempt too many innovations at once. If the children have had a pleasant taste of initiating routine and are keen to solve other problems "for the good of our school," they will readily detect the occasions of undue confusion, and be ready at any designated time with proposals for improvement. As each plan is

adopted, provision should be made for its unfailing application. Monitors elected by the class are perhaps the best agents for insisting upon the faithful performance of the plan adopted. But the best monitors are human and fallible, and laxness is more than likely to creep in before the performance becomes an automatic habit. Begin with the definite warning that once a routine plan has been inaugurated it must never be violated. The ever-present excuse that "this time does n't count" must be forever disposed of before it is offered. Back of the monitors stands the teacher ready to remind, to encourage, to stimulate when they grow weary, and ready in the last resort to compel the pupils' obedience to their own plans and laws.

The more difficult lesson of life is not the mere adopting of good resolutions in times of enthusiasm, but the eternal vigilance and incessant effort, in times of weariness or impatience, which are necessary to convert those good resolutions into stepping-stones to success in this world instead of paving-stones for a worse place, as in the popular proverb regarding good resolutions. More important than the momentary judgment as to what one ought to do is the unflagging determination to do what one ought, whether he wants to or not.

Pending the deliberations and formal action of the children and at any time when their control may fail of efficiency, the teacher's hand remains on the helm. Authority comes to the class only so far as they can and do use it wisely. Beware of "turning over the routine" to the pupils.

Fire drills. The routine fire drill is primarily a measure of precaution for the safety of the children, though it is admirable training in coöperation and contains an exciting military element which the pupils immensely enjoy. The purpose and exact plan are fully explained to the pupils, with the full understanding that they will be frequently

drilled although a fire will probably never occur. At the given signal, which must be very clear and unmistakable, selected monitors run to the exits and make sure that they are wide open, and then stand by to keep down excitement and to help any little one who might stumble. Teachers give their classes the signals to turn, rise, and march, with ordinary composure. Classes march out in the predetermined order, little ones and girls first always. Every pupil keeps in line and in step. There must be no rush or break at any point in or out of the building. After pausing at a safe, designated distance from the building, signals are given and the return is in the same good order. A school of a thousand pupils may be thus emptied in two minutes or less.

If every child were taught these fire drills, even though his own school were absolutely fireproof, theater panics could hardly occur in the next generation. It should be made second nature, in case of alarm, to keep calm, take one's turn, and pass quietly.

PROBLEMS

1. Make a list of various school activities which you think should be reduced to routine.

2. Make a similar list of those that should not be made routine and indicate for each at least one varying factor which makes routine unwise.

3. Make a study of the principles of habit formation and determine to what extent they are applicable to the routine of the school groups.

4. Do you know of any case in which children seriously undertook to solve a problem of management in which their decision was unwise? Analyze the probable causes of their mistake.

5. From the cases of which you know or can learn, determine whether children tend to be too severe or too lenient in governing themselves.

6. Calculate the waste in time through the lack of economical routine in some classroom under your observation. Make a similar detailed estimate for the whole school.

READINGS

BAGLEY. Classroom Management, chaps. i–iii.
COLVIN. The Learning Process, chap. xi.
DUTTON. School Management, p. 137.
PYLE. Outlines of Educational Psychology, chaps. x–xii.
ROWE. Habit Formation and the Science of Teaching, chap. xii.
THORNDIKE. Principles of Teaching, chap. viii.
Consult any good psychology on the laws of habit.

CHAPTER XX

ELIMINATING WASTE IN TEACHING AND STUDY

Some types of waste. The prime essential of all good management is elimination of waste. In school the greatest wastes as well as the greatest values are not in matters of organization or the material things but in teaching and study. While these are not properly within the scope of this volume, a few striking aspects of the waste problem may be outlined here without unduly digressing into the field of teaching methods. Some of these forms of waste are:

1. Teaching subject matter which lacks practical value.
2. Teaching without clear aims and plans.
3. Teaching without systematic check upon deficiencies and attainments.
4. Continuing to teach a pupil what he already adequately knows.
5. Teaching without insuring the use and retention of that which is taught.
6. Teaching without training in the art of economical study.
7. Drudgery in either teaching or study.

Useless material. The burden of most recent discussions of "waste in education" has been the need for a reorganization of the curriculum by the elimination of all antiquated materials and all that is not essentially practical. It is very positively asserted by some of our best recent writers that no subject and no topic of any subject can justly be retained except on the ground of its practical or vocational value. It is now quite generally conceded that

subjects of practical importance have no less disciplinary values than those which are inherently of no direct use, and there is a strong tendency to take the same attitude with reference to the cultural values, namely, that the most practical subjects are the most cultural. The choice of materials must be left largely to the makers of textbooks and curricula, but *the educative values derived from any given topic will still vary, both in kind and degree, through the whole range of child capacities, mainly according to the ideals and efficiency of the teacher.* Practical values are at least more demonstrable, more definite, and more certain to be of social service.

Lack of aim. A more serious waste thus arises from not appreciating the educative significance or planning the educative processes in the topics one does teach. In any lesson which lacks aim and plan, the getting of results is a mere matter of chance. Teachers too commonly assume that the planning has been done in the textbook and that their duty is but to follow the book, blindly trusting to some magic of the printed word to do the teaching. Many modern books do plan their topics most admirably, but it is little they can do toward planning the teaching. Neither is it possible for a writer on methods to prescribe a universal plan for all lessons or for all lessons of a given type or even for all lessons on a given topic. Ready-made plans in the educational journals or provided by authorities have their value for suggestion. They are useful models for study and afford a convenient means of making an observation of the writer's method when an actual visit to his classroom would be impracticable. One may adopt and adapt ideas freely from all these sources, but only a wooden sort of teacher can teach another's plans outright. It is not the plan, but the making of it, that betters one's teaching.

Planning lessons. Thorough planning of a lesson or a group of lessons should include the following points:

1. *Aim.* A definite idea of the results or educative values to be attained by the lesson. These should be in terms of changes to be brought about in the pupils; such as increased skill of a specific sort, new interests, moral or appreciative attitude, study habit, or a knowledge of special facts. This is the *teacher's aim.*

2. *Motivation.* A clear notion of the *motive* which it is expected will impel the children to the particular self-activity by which the educative result aimed for can be attained; together with the incentive or device by which the teacher assumes that this motive will be brought into play and the activity assured. This would have the form of a statement of the pupil's problem or desire, and hence is a statement of the *pupil's aim.* Psychologically, desires are subjective states, but they are aroused or known only with reference to their objects; therefore this statement should be objective. It should state *the thing the pupil wants or wants to do.* Ordinarily the same motive is not equally active or the same incentive equally effective for all the members of a class. Therefore a teacher should give separate consideration to the probable individual aims or different reactions of exceptional individuals.

3. *Type and steps of lesson.* The foregoing essentials, the teacher's aim and the pupil's aim, will determine the *type of lesson* to be used, which is primarily the kind of thinking or effort to be required of the child. This in turn must be resolved into the several specific acts or *steps of the lesson* by which the pupils will proceed from their present interests and attainments to the results sought in the teacher's aim. The teacher's aim, or the end sought, determines the type of lesson to be used; while the pupil's aim, or the motivation, will largely determine the *method* to be used. The *steps of*

the lesson must consist in pupil-activity — not topics or teacher-performance.

4. For motivating each of the steps of the lesson the teacher should plan some *pivotal question* or *problem* for solution.

5. Apparatus, illustrative materials, references, and data to be used in the lesson should be prepared as part of the planning.

6. The *assignment* of further work to be done by the pupils needs to be carefully planned. This is the principal means of motivating successful study.

Value of writing plan. The writing out of the plan of the lesson serves mainly to clarify the teacher's own ideas. One seldom realizes how vague his thoughts are until he attempts to commit them to writing. For a young teacher, particularly one in training, plan-writing is fraught with the richest results in better understanding of children and of educative processes. It is an invaluable connecting link between the theoretical and the practical in pedagogy.

Written plan a guide to criticism. The plan, when written, serves very slightly as a guide in the actual teaching — it is the plan in the mind of the teacher which must direct the class work — but it is still important as a basis of supervisory criticism. The only rational basis of criticizing what a teacher does is a knowledge of what the teacher is trying to do. Even an expert supervisor will comment to little advantage while judging a lesson in terms of what he himself would have done with that subject matter. By having before him the teacher's written statement of aims, motives, and steps intended, he may intelligently distinguish between errors of aim and faults of execution.

Form of plan. The form of the written plan is of little consequence. The essentials already enumerated should stand out clearly in the mind of the teacher and before the eye of

the supervisor. For convenience and mutual understanding it is well for a supervisor and teachers to agree upon a compact and easy arrangement of the essentials. Details ought always to be left to the initiative of the individual. The arrangement of a plan is largely a diagram of one's thoughts, and to restrict the arrangement is to hamper the thoughts.

When plan-writing becomes unnecessary. The sheer labor of writing out plans makes it impossible to do this for every lesson. To require it is to sacrifice teaching energy for red tape. However, so long as the teacher has great difficulty in thinking out the essentials of the plan with sufficient definiteness to reduce them to writing, so long it is important that just this be done. When the laborious writing of many plans has established *a habit of thinking a lesson in terms of definite aims and specific results*, when one comes to make daily preparations in terms of *educative processes rather than textbook topics*, in terms of *pupil-activity rather than teacher-performance*, then effective planning may well be done without much writing. Still, even the most experienced teacher will find the written plan a useful recourse when a new field is attempted, when class work is becoming lifeless or results are unsatisfactory. When a supervisory officer is seeking to raise standards of work or revise modes of procedure, the teacher's written plan affords a needed common ground for discussion, and itself clarifies and invigorates the teaching policy. The writing of plans should not be kept up to the point of becoming perfunctory routine, nor should it ever be entirely and permanently abandoned.

Self-criticism. Finally, the written plan will serve its highest function after the lesson, as a means of checking up aims over against achievements. Self-criticism is more valuable and, with a good teacher, much more common than supervisory criticism. Next, in avoidance of waste, to knowing

what one ought to do is knowing when it is done. "The best laid plans o' mice and men gang aft agley," and a teacher who aims high seldom attains his full purpose with all the members of his class. After the lesson one should think how far his aims were accomplished for the whole class and how far for exceptional individuals, which motives worked well and which were not effective, which pupils responded to the chosen incentives and which did not, what part of the task undertaken is completed and what remains yet to be done. To-morrow's plan must be based on to-day's attainments rather than on to-day's plan. It is this definiteness of aim, planning and checking of achievements, that insures *results* and *thoroughness* in the work of a teacher.

Progress notes. However well the skilled mind can carry the plan of a lesson without written aid, records of the pupils' progress should not be left to a busy, crowded memory. The bookkeeping that schools most need and that has been most neglected is a daily record of the educative achievements and needs of individuals and of the class.

"Wm. confuses *there* and *their*." "Mary told to practice making capital *G* and *Y*." "Chas. mixed on 7×8 and zero combinations." "Jas. to look up relative population of New Orleans and San Francisco." "Study Susie's restlessness. Nervous?" "Is Tom deaf or dreamy?" Such would be the kind of frequently appearing notes regarding the needs and assignments of individuals. But there would also be class notations, as: "Drill all on sepArate, magnIfy, equaTion." "Question arose how height of a mountain is actually found. Prepare to explain and illustrate." "Drill twice each week on uses of infinitives, until class is perfect." "Climate of Brazil discussed. Develop its influence on commerce in Wednesday's lesson." "Put *was* with plural subject on inexcusable list after discussion to-morrow." "Confusion in division with o in quotient. Review and drill."

Such jottings should become a habit. A handy "progress book" or a space in the plan book at the end of each day's plans should be kept for this purpose. Useful abbreviations and compact clearness of arrangement should be cultivated. A busy superintendent can gather more information regarding a teacher's thoroughness and value by a glance at such notes and a little investigation as to how they have been followed up than by long observation of actual teaching — though this last cannot be dispensed with. These "progress notes," once taken down, become *unfinished business* which has the precedence in planning further procedure. Some of them will determine the next day's plans, some demand attention during the study periods, some must wait for occasional or periodical reviews, some will be taken up in teachers' meetings, or in conference with the principal, supervisor, or medical inspector. But once made, like a debit on the day book, it must not be lost sight of until checked off as accomplished or attended to.

Eliminating superfluous drill. In our discussion of promotions we called attention to the economy and motivation attained by the simple device of relieving individual pupils from the drill classes in spelling, penmanship, or the mechanics of any other subject whenever they manifest the particular ability sought in that class and *make use of it in all work outside of that class*. The economy here is not merely that some pupils are relieved from further learning what they have already learned and from being bored by the tedium of continuing to do what is already done, but the fact that any pupil may be excused from any drill work just so soon as the aim of the drill is accomplished, tremendously vitalizes and economizes all the drill work of the class. Ten minutes' drill is a vastly different thing when one is trying to master some specific skill adjustment which he finds is necessary for his work from what it is when one is simply enduring

the inevitable writing period of the daily schedule. Application of what one has learned — which is after all the only permanent learning — is a very different matter when application is the only means of avoiding regular drill lessons. Nothing is more certain than that some pupils need more drill on any particular task than do others. To keep all pupils on the same task the same length of time must necessarily be wasteful. Either the rapid pupils are wastefully retarded and more wastefully bored with doing useless things or else the slower pupils are wastefully hurried and more wastefully discouraged. Any organization which does not provide for pupils' leaving tasks when they are accomplished is in a large measure inefficient.

Waste in lack of thoroughness. Pedagogical wastefulness culminates in the very common practice of filling at the spigot of laborious drill while wasting at the bung-hole of careless forgetfulness. Discouraged teachers complain that teaching is a process of filling a sieve with water. However faithfully they labor to get the knowledge in at one ear, much of it immediately goes out the other. Wherefore they disgustedly assert that there is nothing between the two to stop it. We must agree that there is little hope for progress when what is taught won't stay taught. Whatever the method, thoroughness and permanency are essential to teaching.

What is "thoroughness"? But herein alone lies *thoroughness*: not that we repeat *ad nauseam* in the teaching, but that having taught we see to it that what is taught is used; that when a mistake is corrected *that* mistake ceases to occur; that when a right way of doing a thing has been learned, only that way is used thereafter, whatever the cost of effort and watchfulness, until habit is formed and takes up the burden. Particularly in contending against home-formed and home-encouraged habits of speech is eternal vigilance the price of thoroughness and economy. Progress

notes will constitute an invaluable aid in attaining vigilant thoroughness. A list of "inexcusables" is an especially effective device.

What errors are inexcusable? When a definite thing has been adequately taught, reviewed, drilled upon, and practiced until there is no doubt that every pupil can use it correctly if he will, until only carelessness can explain the continued misuse of it, that misuse should be classed as *inexcusable*. Dullness, ignorance, failure to comprehend, inability to do the thing required — these demand patience and further careful teaching; but heedlessness, persistent doing wrong what one can do right, through lack of self-control in formation of the new habit — these need vigorous, relentless treatment. The spelling of common words, the fundamental number combinations, gross colloquialisms, inelegancies, and everyday grammatical blunders, — these are the sort of things which must be made taboo. A paper containing one of these "inexcusables" is simply rejected *in toto* and must be rewritten or at least purged of the offending error without help before it is considered. A recitation in which one occurs is deemed a failure. The guilty pupil is stopped instantly and seated ingloriously. Like a parliamentary point of order, the correcting of an inexcusable always has precedence over any other business. Punishments, even specified punishments, may be inflicted, because the purpose is to make it impossible for the child to forget until the right habit is formed.

Making the list of "inexcusables." In making additions to such a list of inexcusables, only one thing at a time should be permitted and that only after review, special drill, and full warning that henceforth this particular blunder shall be intolerable. Never should the list be used as a cheap incentive to force extra exertion in the study of new lessons. It is entirely excusable to make any mistake once. Perfection

in any ability is acquired by a child only very slowly and gradually. The term "inexcusable" is a severe one. It is better not to use it than to abuse it. It must mean two things, — that the mistake ought not to be excused and that it will not be excused.

Social motivation. Both in making and in enforcing this list of the errors which will not be tolerated social motivation should be used as far as practicable. It is best that each addition to the list should be made by formal vote of the class, and they should be warned against haste rather than led on too rapidly. They should feel very distinctly that putting any tendency of theirs on this list is a very positive and serious "swearing-off." It should be a point of honor that there shall be no infraction permitted. As the purpose is to make every child sensitive to the bad usage, it is well to have them organize themselves into teams, or else utilize regular groups, rows, or other divisions, for the special purpose of watching, correcting, and penalizing each other on these mistakes.

Grammatical weeks. For a very few of the most deep-rooted tendencies, such as "we was," "ain't," *have* with the past tense instead of with the participle, etc., there might well be special weeks set aside. Parents should be informed and asked to coöperate. This may be done through parents' meetings or through circular letters formulated, authorized, and signed by the class. Brief drills several times a day should be introduced in school, and every child should be a detective in school, at home, and on the playground. Every plan should be adopted which will keep that correct usage vividly in the foreground of consciousness during the entire week, and drills should be frequent enough to fix the habit for all time.

Waste in study. The art of study like the art of teaching is not properly within the scope of this work. But it is

not amiss to emphasize the recent discussions regarding the necessity of teaching and training children to study. After all, the child's own work is all there is about the school that is actually educative. All things else, including the teacher and all that he can do, are merely means to secure and direct that child-activity. Pupil-activity is primarily and chiefly study. Efficient study is one of the most advanced and difficult of human arts. Few teachers can study effectively and economically. How very few can direct others wisely in the complexities of the process! Yet teachers have blandly assumed that if a child is given an assignment in a book he should by nature know just how to master it. Some even avow that one can no more be taught to digest his lesson than he can be taught to digest his food; all that is necessary is to give him the food and let nature do the rest!

The art of study must be taught, also the art of teaching children how to study. Here we can do no more than lay down a few simple principles for training in study.

Study is selective thinking. All effective study consists in deliberate, purposive, *selective thinking*. It consists in *selecting the problem* to be solved and then the data which will help to solve it and the method of solution; in *selecting new ideas* out of their setting of familiar ones, in *selecting difficult points* out of the many that are readily grasped, in *selecting the viewpoint* or aspect which contributes to one's present purpose and passing over the many others which are not at the time pertinent, in *selecting* one difficulty at a time for adjustment and then *selecting* those ideas which can contribute to that adjustment.

Dead-level study is waste. Careful observation will soon demonstrate that children often work as hard on learning to spell words that they already know and could hardly misspell with an effort as they do on those that are strange

and difficult; they study the syllables that are unmistakable as much as they do those with treacherous, unusual combinations. The result is that with much labor just those things are learned which were known before. Worse still, pupils are often told by teachers to "study each word ten times." They spend as much time on the "tables of fives" in multiplication which they never miss, or the sixes which they seldom miss, as on the sevens and zero combinations in which occur about nine tenths of all the mistakes that are made. And further, by studying them as "tables" they spend as much effort on six times one as they do on six times nine, and much of their energy is expended on getting them in an order which is never used in practice. The more one drills in routine fashion over materials imperfectly known, the more he fixes in his mind the things already there and the more he becomes incapable of seeing the things not already understood. And this is what most children do when reviewing or relearning a poorly prepared lesson. It is a safe estimate that not less than fifty per cent of the study of school children is waste.

Assignment. The child's study may be controlled by the teacher (1) in the assignment, (2) by direct supervision, and (3) by the recitation.

The assignment should consist in (1) making the problem or purpose of the lesson clear and dynamic in the minds of the pupils; (2) arousing a genuine interest in the thing to be done, making the problem one of significance to the learner; (3) indicating the special difficulties and preparing the pupils to overcome them successfully; (4) making the pupils conscious of the most economical modes of learning the lesson, alert to seek for these modes and keen to recognize and eliminate wasteful dawdling; and (5) guiding the pupils in finding the essentials to be learned and the kind and degree of learning needed for each.

In the recitation the pupil should be held responsible for the kind of learning and the kind of results which are sought. Detailed, fragmentary questions will secure study and thinking only of the detailed, fragmentary sort.

PROBLEMS

1. Observe and criticize the teaching of several lessons from the standpoint of economy due to definiteness of the teacher's aim.

2. In any lesson, note the difference in attainment among pupils due to definiteness of aim in what they are doing. Specify the instances and the evidences.

3. Criticize several textbooks on the ground of the clearness and definiteness with which they bring the aim of each lesson before the student.

4. Write out exactly what you regard as the aim, in terms of pupil's attainments, of several selected lessons in different subjects.

5. Write out a statement of the pupil's aim for the same lessons.

6. Study and compare carefully the methods of preparing plans as given in Strayer, McMurry, Earhart, and others. (See Readings.)

7. Study and compare carefully the classification of lesson types given in similar works.

8. Plan a method of keeping progress notes on your own personal studies.

9. Examine any accessible progress notes kept by teachers and make out a series of them based on actual observation or teaching of classes.

10. Write out recommendations and probable effect, in the class under observation, of (*a*) promoting the pupils now proficient out of the drill classes in fundamentals; (*b*) making the standard of work out of the drill class rather than in it the basis of promotion.

11. Make a practical list of "inexcusables" for the class under observation.

READINGS

CHANCELLOR. Class Teaching and Management, chap. v.
CHARTERS. Methods of Teaching, chap. xxv.
COLGROVE. The Teacher and the School, chaps. xviii, xix.
DEARBORN. How to Learn Easily, chap. i.
EARHART. Types of Teaching, chaps. viii, xiv, xv.
HALL-QUEST. Supervised Study.
MCMURRY, C. A. Method of the Recitation, chap. xiv.
MCMURRY, F. M. How to Study, and Teaching How to Study.
O'SHEA. Everyday Problems in Teaching, chap. vi.
PARKER. Methods of Teaching in High School, chaps. xvi, xxi.
STRAYER. The Teaching Process, chap. vii.
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CHAPTER XXI

WORK AND DRUDGERY

Play and work. *Play*, we are told, is activity performed because of the satisfaction afforded the doer in the process itself, while *work* has its incentive in some reward beyond itself which the worker seeks. The distinction seems to be largely lost when play becomes professionalized or when one comes to love his work for its own sake rather than for its rewards, for then one's play becomes his work and his work becomes play. Often what is work for one is play for another, and vice versa. We have all heard of the man who cleared his garden of stones by drawing a face on the fence and inviting several boys to come and throw stones at it. He turned work into play. It is the activity itself that every healthy person enjoys, and the mere fact of its being useful does not ordinarily rob it of its attractiveness. Also it is the activity itself that is educative. But it is the law of all animal nature that any activity which is agreeable tends to be repeated, while that which is disagreeable tends by the very fact of its unpleasantness to be inhibited. That which is done pleasurably, in other words, is more readily and more permanently learned than that which is done without interest.

Routine and drudgery. Routine, as we have already seen, is the sort of activity which by frequent repetition becomes easy and self-directive. It is work, in that it is not done for its own sake, but work in which the effort and attention required to perform it have been reduced to a minimum. When work becomes so hard and so continuous

that interest in the end is lost in fatigue or in dislike of the process itself, when routine duties must be performed to the point where the purpose is lost sight of and the effort-reducing influences of habit formation do not reduce the necessary strain and attention so that the work may go on automatically while other interests occupy the mind, then work becomes *drudgery*. Play is interesting for its own sake, work for the sake of something beyond itself; but drudgery is without interest. Drudgery is disheartening, depressing, and grows harder instead of easier with repetition — except so far as habit may ultimately come to the rescue.

Aims, — fleeting and abiding. Nature has provided that the lower forms of life and man in his simpler processes shall act in response to immediate stimuli, to interests that look no farther than the moment of acting. Such are play and such are other activities which satisfy some need or desire of the instant. The condition of civilization, however, is that man shall by means of his intellect foresee needs of the morrow, of the winter, of old age, or of future generations and shall feel an interest in these sufficient to outweigh all but the most urgent of his immediate interests. These higher and more distant purposes become tremendous forces in determining the conduct of civilized adults and to a much less degree that of the immature — children and savages. The aim of education is to substitute these larger purposes of civilized humanity for the push and pull of momentary impulses as the determining factors in human conduct. Not to eliminate the latter, but to subject them to the aims and judgment of the intelligence. To state it another way, the aim of education is to establish the power and habit of working persistently, consecutively, and determinedly toward ends which are foreseen; to establish the capacity for "endurance against obstacles and through hindrances." It is a "demand for *continuity* in the face of difficulties."

Is drudgery blessed? Now, because the characteristic of drudgery is that it affords difficulties and necessitates the suppression of immediate desires, it has become traditional that drudgery, *per se*, develops character; that it trains one to act independently of his inclinations, to respond to the call of duty or purpose rather than of pleasure. If this were true, drudgery would indeed be our supreme educative asset. But is it true? Our purpose is not to incapacitate one for responding to momentary interests but to capacitate him to have enduring purposes, which will outweigh the others when they conflict. The driving force in drudgery is not a dominating purpose ruling from within but a grinding necessity imposed from without. Merely doing the thing required can at best develop a perfunctory habit. The development of character is the development of ruling purposes. One learns to act independently of his temporary impulses, not negatively by being coerced into the doing of certain tasks, but positively by acquiring guiding ideals. Servile submission to external necessity develops no trait of character but servility. Power to respond continuously to a sense of duty can come only through finding satisfaction in acting from a sense of duty. The love of doing right for right's sake is fostered only by finding the joy in doing right for right's sake. The fundamental mistake of the advocates of the "Blessed be drudgery" theory is the assumption that the *child's character* is developed by the *teacher's purposes*.

Dewey on work and drudgery. The distinction is stated by Professor John Dewey in his forceful monograph, "Interest and Effort." He says:

> There seems to be no better name for the acts of using *intermediate* means, or appliances, to reach ends than *work*. When employed in this way, however, work must be distinguished from labor and from toil and drudgery. Labor means a form of work

in which the direct result accomplished is of value only as a means of exchange for something else. It is an *economic* term, being applied to that form of work where the product is paid for, and the money paid is used for objects of more direct value. Toil implies unusual arduousness in the task, involving fatigue. Drudgery is an activity which in itself is quite disagreeable, performed under the constraint of some quite extraneous need (p. 78).

If one means by a task simply an undertaking involving difficulties that have to be overcome, then children, youth, and adults alike require tasks in order that there may be continued development. But if one means by a task something that has no interest, makes no appeal, that is wholly alien and hence uncongenial, the matter is quite different. Tasks in the former sense are educative because they supply an indispensable stimulus to thinking, to reflective inquiry. Tasks in the latter sense signify nothing but sheer strain, constraint, and the need of some external motivation for keeping at them. They are *un*educative because they fail to introduce a clearer consciousness of ends and a search for proper means of realization. They are *mis*educative because they deaden and stupefy; they lead to that confused and dulled state of mind that always attends an action carried on without a realizing sense of what it is all about. They are also *mis*educative because they lead to dependence upon external ends; the child works simply because of the pressure of the task master and diverts his energies just in the degree in which this pressure is relaxed; or he works because of some alien inducement — to get some reward that has no intrinsic connection with what he is doing (p. 54).

The meaning of drudgery. A school task, then, contributes to the making of character in just about the degree that it is self-directed; impelled by enduring purposes from within rather than by compulsion from without. The work that a child does through a sense of duty or a sense of obligation, through a pride of self-control or a desire to give pleasure to others, — such acts are work motivated in the highest degree. They are as far from drudgery as possible. Tasks that are done through a fear of punishment, through

the domineering presence of the master, through any coercion that the toiler would avoid if he could, — these are the tasks that make for servility, for weakness of character, for obedience to the impulse of the moment. It is just as truly a yielding to momentary interest to struggle on through labor under the prodding of fear or of necessity as to yield to the siren call of sensuous pleasure. Drudgery is like work in the lack of an intrinsic attractiveness in the doing, but it is like play in the lack of an abiding purpose; it affords the toil but lacks either the primitive or the civilized reason for toiling. It tends neither to establish a process through its agreeableness nor to justify it through its reasonableness. *Just one thing is worse for character building than doing one's duty through compulsion from without — and that is not doing it, whatever the reason.*

What makes for character? Without the requisite pupil-activity there is no possibility of education. The thing that ought to be done must be done whether one wants to do it or not, but the character development consists not in being made to do what one does not want to do but in wanting to do what one ought to do. Character lies not in some overt thing having been done but in something having been done for the sake of a high ideal. The gratuitous exercise of will power, the gritty determination to overcome difficulties for the sake of overcoming, to do the hard thing because it is hard — these are the very foundation stones of strong character. The teacher who leads a child to such splendid achievement has done a noble thing. But he has done something as different as possible from *exercising his own will power* upon the child, from *determining for the child* that he must overcome the difficulties.

Life has no need for drudges. Life is full of duties that can be made easy through intelligent reduction to routine. Life is full of work — hard work — limitless things to be

done that are worth while doing and doing well. And there is reward, near or far, for doing things well and for working hard and faithfully. The world needs workers, doers of intelligent, purposeful, hard, wholesome work, and the world pays them and respects them. But the meanest walks of life are already cluttered with drudges, those who toil aimlessly, hopelessly, painfully, and must be driven to every step of their tasks. They get little for their service and are usually not worth that little. If power must be perpetually directed from without, mule power or steam power is incomparably cheaper and better than human muscle power. Self-directing intelligence is the commodity that makes any person valuable to himself and others. This is developed by work — not by drudgery. If one must be a driven drudge in life, surely he needs no training for it in school. Mere drudgery cannot educate.

Summary principles. We may sum up the foregoing discussion in a few principles, with their application to practical problems:

1. *Education is possible only through the pupil's activity.* Whatever is done leaves some educative result.

2. *The same pupil-activity may be made play or work or drudgery according to the manner of its motivation.* It has already been shown that much of it may profitably be reduced to routine. Such common devices of the primary teacher as number games and story dramatizations give a play quality to lessons which must otherwise be work or drudgery. So does the spelling match or other forms of competitive recitation. The very attitude or tone of the teacher may make the difference between spiritless toil and spirited play; for example, contrast the pupils' response to an imperious "Now, every one of you get that lesson and be quick about it," with the effect of a smiling "Let us see which one of the class can finish this lesson first."

3. *School work naturally gravitates toward drudgery unless good teaching counteracts the tendency.* The unbroken regularity of daily lesson assignments inevitably tends to sameness, to monotony, and often to the strain of unduly heavy requirements if special care is not taken to avoid these very tendencies. Any school work, because of its abstractness and lack of immediate usefulness, will inevitably fall into the form of drudgery by the mere fact of failure to connect it with ever-renewed and quickening interests. At best, teaching machinery will progressively consume more and more of the available energy in friction and lost motion unless constantly lubricated with intelligent adaptation. It will run constantly harder and heavier if the contact of the parts with each other and with the driving force is not faithfully adjusted wherever they are found to bind or drag.

4. *Efficiency in learning is attained, according to natural laws, when the learning act is either play or work or is reduced to routine, but drudgery is neither natural nor efficient as a learning process.* Wholly in infancy, almost wholly in the kindergarten and in a decreasing degree throughout the primary grades, the learning activities readily take the form of pleasurable play. This very pleasurableness is nature's means of making the doing of new things easy for the young and strengthening the tendency to retain permanently what is learned. As the responsibilities of mature life approach, there develops the capacity for continued self-direction in response to permanent policies and distant aims which would have no force in early childhood. One is driven through the whole year's work for the sake of the annual promotion, or drives himself through high school and college for the sake of success in a chosen occupation; or one toils through long, hard tasks in order to excel his fellows; or he grapples with a problem that he may be victorious over its difficulties. Continued striving to attain a purpose — this is

the characteristic of work. But tasks that are accomplished only through the continued pushing, nagging, prodding of some external force or will power is work done at the very lowest standard of efficiency. The resultant learning is, of necessity, very imperfectly accomplished, and the waste of energy is enormous. The very disagreeableness through psychological necessity increases the difficulty and reduces the permanency of the connections made. *Economy in learning, then, consists in keeping all school tasks in the plane of play or of work, — wholly play in early childhood and progressively making the transition to work as one grows toward maturity, — in reducing suitable activities to routine habits but allowing no learning to fall to the wasteful level of drudgery.*

5. *The development of character, increasing capacity for persistent consecutive achievement without external compulsion, is attained only by forming the habit of acting from inner ideals and purposes.* This is possible neither through play nor drudgery but only through being accustomed to consistent, well-motivated work.

6. *Disappointment in attaining an end for which one has worked faithfully begets discouragement and loss of confidence in ideals and purposes.* Aims too remote may stimulate for a time and then gradually lose their effectiveness. It is therefore necessary in teaching to set up definite and attainable ends, especially the sort that every child may succeed in reaching. Prizes have the objection that but very few can possibly secure them. Even if they should stimulate all the class a first time, the great majority would soon become immune to any stimulating effect. Promotions at long intervals tend to be effective for only a short while before the time they are determined. Perhaps the most reliable and generally effective purpose for daily use is the love of mastering difficulties, of solving the problem immediately

in hand, or of overcoming an obstacle. To keep this sort of purpose vital, tasks assigned must be carefully adjusted to the pupil's capacities — hard enough to challenge strenuous effort but not too hard to make ultimate success reasonably sure. Practically, this means that assignments must be in terms of definite achievements, either objective or subjective, which the pupil fully appreciates and knows when he has reached.

Drudgery in teaching. It is hardly less important for *teaching efficiency* than for learning efficiency that necessary tasks should be so adjusted as never to fall into the wastefulness of drudgery. The drive of a daily schedule, of rules and regulations, the custom of taking up written work and returning it at a given time with certain sorts of corrections, and the like, serve as an external impelling force quite unlike an inner purpose or aim. Such tasks by their monotony, by their heavy laboriousness, by the lack of any feeling of definite achievement, lose the pleasing character of play or the worth-while character of work. Because they demand constant attention and cannot be done automatically with success, however often repeated, they cannot be made easy or economical by reducing them to routine. When a considerable portion of the daily work of a teacher takes on this dreary character, teaching becomes dreadful in its oppressive monotony, hopeless in its aimlessness, and almost profitless in its uninspiring deadness. In the next chapter we shall attempt to show how one typical sort of teaching drudgery may be lifted to the plane of economical and interesting work. It is our firm belief that whenever any task of teacher or of pupil cannot be elevated from the plane of drudgery there is something radically wrong with the assignment of the task. Work must be done or there is no teaching or learning, but the particular task or the particular form or quantity of it or the manner of assignment which converts

it into drudgery is wrong. It is precisely this motivating of tasks, of fitting them to worthy purposes and vital interests that constitutes good teaching and good management. Neither study nor teaching is good if it is drudgery.

PROBLEMS

1. Observe carefully the day's work of a child in school and list as many as practicable of his activities which are distinctly pleasurable and those which are unpleasant. In which of these groups does he appear to make the more rapid progress in learning the processes involved?

2. Select typical activities which have the character of drudgery and make suggestions for changing them, without sacrificing their educative value, (*a*) to well-motivated work; (*b*) to play.

3. Select forms of work and indicate means of converting them into play without destroying their teaching value; also of converting play into work.

4. Give instances where work has dropped to the level of drudgery: (*a*) through having the purposes of the pupil too remote; (*b*) through too great monotony; (*c*) through too heavy tasks; (*d*) through repeated lack of success in attaining the aim. In each instance give your plan for remedying the fault.

READINGS

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DE GARMO. Interest and Education, chap. viii.
DEWEY. Democracy and Education, chap. xv.
DEWEY. Interest and Effort in Education.
KLAPPER. Principles of Educational Practice, chaps. xiii, xiv.
MOORE. What is Education? chap. viii.
PAYOT. The Education of the Will, chap. iv, p. iv.
RUEDIGER. The Principles of Education, p. 267.
THORNDIKE. Educational Psychology (Briefer Course), chaps. v, vi.
THORNDIKE. Principles of Teaching, chap. v.

CHAPTER XXII

MARKING EXERCISES

The drudgery of marking papers. In the gospel of good teaching, as we have seen, there can be no such beatitude as "Blessed be drudgery." Blessed be work, hard work, persistent, relentless, purposeful work, but not drudgery. It becomes then a most practical problem of school management to eliminate the drudgery — not by the neglect or abandoning of a single task that is useful or profitable, but by changing it somehow to interesting, wholesome, intelligent work. There is practically universal agreement that of all the tasks of the teacher, correcting pupils' exercises is the nearest approximation to hopeless drudgery.

Prevents good teaching. The conscientious teacher ordinarily spends countless dreary hours, after school and late at night, when mind and body are wearied, painfully marking the same ever-recurring mistakes by some more or less elaborate system of symbols and affixing to pupils' efforts valuations which can be justified by no logical or psychological reasoning. From papyrus in the British Museum we learn that the schoolmasters of Egypt did the same thing in much the same way before the time of Abraham. It is the assumption that this marking somehow increases the pupils' abilities and directs the teaching process. But the work of a tired mind is necessarily perfunctory. When one is weary and correcting papers has become a bore, genuine judgments as to the needs and progress of the writers is impossible, and the marking degenerates into the mere indicating of the more glaring and obvious errors — the "inexcusables."

Rarely indeed does such marking suggest improvements in one's mode of instructing or leave one in a sufficiently vigorous or interested mental condition to plan them. In order to require enough written work to afford adequate training for a class of thirty or forty, the teacher attempts to do more of this sort of correcting than it is humanly possible to do and keep himself fit even to do the correcting with discretion, to say nothing of an intelligent study of the work graded or attention to the many other out-of-school duties of a teacher. The grinding drudgery of marking papers often precludes the physical recreation, the social relaxation, and the professional and general reading necessary to growing efficiency.

Marking papers fails of its purpose. Only a powerful sense of duty could drive a teacher to this slavish work of endlessly marking papers. One must feel that it contributes tremendously to the pupils' good. But what, in fact, is the benefit that the pupil derives from it? Not uncommonly when the paper is returned to him he merely glances at the grade "given" him and drops the paper in the waste basket or stuffs it in his desk — to await the cleaning day. If he is required to correct the errors marked, he probably does so in a mechanical fashion, only to repeat the same blunders in his next exercise. Even these are not corrected unless the overburdened teacher still further loads himself with the yet worse drudgery of re-reading the papers. Of all the dead-level work of the school, perhaps that which leaves the least permanent impression on the mind of a pupil is the correction of his written work as ordinarily done by his teacher.

Eliminating needless mistakes. The first step in eliminating this drudgery is to stop the endless repetition of the *same* mistakes. Errors in spelling common words, in the fundamental arithmetic combinations, in capitalization,

ordinary punctuation, indentation of paragraphs, and the formation of letters, — any definite things that have been fully taught and are got wrong only through sheer carelessness, — such errors should not be tolerated. To correct them over and over is to encourage a child in confusing and unlearning what he has painfully learned, in slipping back where he has laboriously climbed up, in doing wrong what he can do right. It were better that he should not be permitted to write than that he should repeatedly write the same mistakes for the teacher to correct. The pupil must feel a responsibility for the knowledge which he has. He has no right to expect further instruction so long as he fails to make use of present attainments. Absolute refusal by the teacher to consider any paper marred by these inexcusable mistakes will soon develop in the pupil a habit of criticizing his own work before handing it in, of making sure that he is right as he goes along. No new lesson can be so important as the using of the old.

Application of the taboo. The list of "inexcusables" described in another chapter has been found a most effective means to this end. When pupils fully realize that carelessness, instead of relieving them from a moment's effort and care, enormously increases their immediate labor, unnecessary mistakes will largely disappear. With the elimination of carelessness will come the elimination of mere drudgery in correcting. Then the attention of teacher and pupils may be centered upon the new problem of the lesson, on which the paper is intended to afford exercise.

Values of grading by pupils. It is this new problem upon which the whole class needs all the training practicable and upon which the mind should be focused in both writing and judging the paper. For the teacher to do the marking is to deprive the pupils of the most effective form of training. That inestimable socializing value which comes

from each pupil's measuring himself critically against his fellows, testing himself by the standard of his peers, seeing himself in the light of their attainments — this is at its best when one is critically examining the papers prepared by his classmates. An attitude of critical, independent judgment and a full-rounded, many-sided view of a problem is attained in no way better than in judging numerous successful and unsuccessful efforts at its solution. Why deprive the pupils of these supreme educative opportunities?

Values of grading to the graders. Are there rapid pupils in need of "busy work" to occupy spare moments? What better employment than judging the papers of the class? Are there slow pupils whose mastery of the problem is still imperfect? What better drill is possible than the grading of the same problem in a dozen to forty papers? What finer motivation for getting that question clear in mind and knowing that it is clear? Are there careless ones? How better motivate thoroughness than by having them mark the papers of the others, knowing that each mark will be jealously scrutinized by the author?

Values of grading to the writers. It is in this fact, that grading by one's peers is challenged, that its greatest value lies. The teacher's marks are accepted as a matter of course, and the incident is regarded as closed as soon as one finds "how much he gave me on it." Nothing more effectually stops the thinking process than the teacher's authoritative approval or disapproval of an answer in oral or written recitation. Nothing more effectively sustains and projects the mental activity than criticism by a member of the class. Fortunate, indeed, that mistakes may occur in the pupils' grading.

An illustration. An instructive incident came to the writer's attention in a school where this plan of grading by pupils was in use. V. was a recognized leader in a

seventh-grade arithmetic class. He was rather more brilliant than painstaking. On this occasion the papers of the whole class had been given him to grade. By merest chance he had misread one of the problems and graded every paper incorrect which did not contain the same mistake that he had made. The papers were returned to the class without comment by the teacher. As always, every mark was eagerly scrutinized by the author of each paper. Immediately a storm of indignation arose. Under the restrictions of parliamentary procedure the aggrieved ones were given an opportunity to state their case, and V. and those who agreed with him, to answer. Then each side was required to prove its position to the satisfaction of the class. The next few minutes developed some of the clearest arithmetical analyses and keenest debating ever attained in the school. The principles of that problem were learned, never to be forgotten, and V. had a remarkably effective lesson of the kind he most needed. The teacher merely presided, keeping everyone courteous and good-natured.

Some misconceptions. The pupil-grading plan was once recommended to a meeting of teachers, and later one of them reported that he had tried and abandoned it "because the parents complained that it was making the smart pupils snobbish!" He had missed the whole point. A constant change of those who do the grading is essential, and there is less occasion for calling on the best pupils for this work than for calling on the slower ones. Another teacher found that certain chums and cliques were grading each other too high! He, too, caught only half the idea. Getting marks for record is but an incidental aim in grading. Interest in improving abilities should destroy all motive for deception, while the constant oversight of the teacher and the constant changing of the graders should make partiality impossible. Ordinarily the pupil doing the grading places his name

on the paper, and failure to mark a mistake is not only more serious than making the mistake in the first place but subjects the careless or unfair marker to the constant special watchfulness of the teacher. In the writer's own experience in revising grades made by students he has had occasion to raise the marks quite as often as to lower them.

Variations. Many variations of the grading plan may be devised:

1. One pupil may grade all the papers for the class, taking one or more evenings or study hours for the purpose. This would ordinarily be a pupil who has more spare time at his disposal than others or else one having special need of practice on the particular problem of the paper.

2. The lot may be given to a group to work on collectively with full opportunity for conference and discussion. These may be temporary groups for the purpose, or one permanent class group may grade the papers of another group. An advanced group may well review by means of grading of papers for a lower group. Rival groups may exchange papers, or rooms or schools may exchange.

3. The papers may be distributed among several pupils, no one having enough to interfere with his regular tasks.

4. A most expeditious method is to have the papers passed, one, two, or three steps to the right; to the left; backward or forward; or exchanged by rows in all possible permutations. Under the precision of well-ordered routine the passing and return of papers takes but an instant. By constantly varying the order of exchange there is always a new interest and a new social value in getting a paper to judge. The essentials of the lesson are then reviewed under the lead of the teacher or, better, of one pupil or several of them in turn, and each paper is marked. At a signal, papers are returned with routine promptness.

Each pupil then reviews his own paper and indicates his acceptance or definite exceptions. They are then passed up in order to the teacher. Each pupil has been over the points of the exercise three times; once in preparing it, once in judging another paper, and finally in reviewing his own — at least so far as his mistakes made it desirable that he should.

Makes for economy and definiteness. A moment's thought will demonstrate that reviews, drills, and textbook recitations can be far more rapidly and thoroughly conducted in this manner than by any form of oral recitation, provided the point to each question is very definite and clear. Questions must be asked so that only one answer can be correct and the essential part of that answer can be so precisely stated that every pupil can know positively whether an answer is correct or incorrect. Not that the answer must be in certain words, but that the exact thought must be clearly expressed.

The reflex effect upon the teacher of thus making his instruction definite and of having definite evidence of results is obvious. The papers also afford a most convenient means of checking the progress of a grade and of comparing grade with grade. These values should make this plan of pupil grading popular with supervising officials.

Exact grades required. The grades given by pupils should be indicated precisely on each question or point separately, to insure care and to facilitate ready review by the author and by the teacher. Symbols may be used likewise to indicate errors in spelling, grammar, punctuation, and the like. The grader should be held rigidly accountable for the thoroughness and accuracy of his grading. The author should have the inalienable right of appeal on any correction or valuation of his work. This appeal should ordinarily be referred to the class rather than to the teacher's fiat for decision.

Value in questions of taste. In matters of opinion or taste, as in literary style, ethical judgments, and other matters not susceptible of ready demonstration or positive conclusion, there are even greater educative values in grading by pupils. In such questions the grader should express his criticism concisely in words and be prepared to defend his position. If the author does not accept the criticism, it is a point on which the judgment of the class will doubtless need developing. It is then brought up in class for discussion, the parties to the disagreement leading the argument and being supported by all who have opinions to offer on the subject. The debate is kept within parliamentary limitations by the teacher, who acts as presiding official. If there is a tendency to ramble and repeat, each side may be required to reduce its points to writing on the board, where all may see. If there is a contradiction as to facts, authorities should be demanded of both. As long as there is real difference of opinion, the question is well worthy of being held over from day to day, while materials are being gathered and prepared for presentation. The curriculum can contain no lessons of greater educative value than genuinely motivated discussions of this sort. Whenever the teacher injects an authoritative decision, the whole matter drops "with a dull and sickening thud." *It is not the conclusion but the genuine discussion that is of value.* Nevertheless, the whole discussion must be a search for truth and light. Whenever *the class* is convinced that one pupil is protracting an argument through mere stubbornness, it should have the right to vote to table the question or to register a decision. Pupils should soon learn from the social pressure of the class that true debating is not seeking unfair means of getting decisions but is a genuine search for truth and quick admission of error when found.

Questions susceptible of ready verification by the individual pupil would, of course, not be permitted to occupy the time of the whole class. Teachers who think this a slow or cumbersome method of getting papers graded should remember that *there is no educative value in merely getting the papers marked;* that *pupils' judgment is developed by their own judging, not by being judged by a teacher.*

The teacher's study and marking of the papers. The teacher will ordinarily take up the papers after the writers of them have scrutinized the grading and indicated their agreement or disagreement. He may then read all the papers or none as may seem necessary, and record whatever marks may be desirable. Usually he will select a few of the poorest to study the individual needs of the writers, and some medium and some of the best from which to study the needs of the class as a whole. Thus he guides his further procedure in his teaching. He may direct his entire attention to some particular problem or aspect of the work to determine the cause of some weakness in his teaching. One soon learns that there are some pupils who need close watching either in their writing or their grading, and their work is selected with sufficient regularity to spur them to the greatest care. Other papers one selects to check on some individual instruction which has been given. Still other papers are picked out from the pile for the sheer joy of reading a good paper and watching the glorious unfolding of capacities in a promising pupil. Obviously those selected for study will vary from day to day as may be most helpful in checking up one's daily progress notes and clearing his mind as to his teaching problems.

Sometimes the teacher will return to the pupils only those papers on which he has made comments, sometimes he will return all of them, and sometimes none at all. It is best that papers should come back to the pupil only when they

will be received and studied eagerly. If they are destined to go unheeded to the wastebasket, let the teacher put them there. Notebooks and many important papers should be kept permanently by the pupil for future reference or comparison.

Instructive comments. The teacher's comments on the papers should not be in symbols or grades; they should be personal and broad. *He judges the pupil, not the paper.* Formality in his grading should be taboo and routine marking abhorred. The following teachers' comments are quoted at random:

Your penmanship is getting careless at times. You must improve or return to the drill class. Do your best on *every* paper and you will not need the writing drill.

Too many words here that add nothing to the meaning. Note those I have underlined. Rewrite the page in the fewest words that will express your exact meaning and hand in with this to-morrow.

A paper as neat as this is something to be proud of. Show it to your parents and keep it as a model.

It is a pleasure to note the rapid improvement you are making in the clearness and force of your statements. Make every paper the best you can, and that best will soon become easy.

Look up exact meaning of words I have double-underlined. Can you find others which express your meaning more precisely? Can you defend by actual instances the statements of your second paragraph?

There is no drudgery in marking papers in this manner. There is no monotony, no weary driving when one is tired and unfit to judge. In fact, there is very little in all school life of more interest and greater educative efficiency than marking papers and studying the progress of class and individuals from day to day. Such a change from routine grind to appreciative judging and planning lifts the work from pedagogical ditch-digging to expert professional thinking on the highest plane.

PROBLEMS

1. Taking several sets of exercises at random from different grades or classes, classify all errors as "excusable" and "inexcusable."

2. Write a summary of the effects of permitting children to hand in papers containing errors which they themselves might have corrected.

3. Write a summary of the advantages of the correcting of papers by pupils; (*a*) to the writers of the papers; (*b*) to the critics; (*c*) to the teacher.

4. What objections are there to a teacher's purposely making errors in his corrections as a means of challenging the watchfulness of the pupils?

5. Watch carefully and make a precise statement of the reactions of children when a set of papers marked by a teacher are returned.

6. Make a similar study of the reactions when papers graded by other children are returned.

7. Make broad, constructive criticisms on a few typical written exercises and study the probable effect of the criticisms on the pupils' work.

8. Write out all objections which occur to you to this plan of pupil grading. Study the objections to see (*a*) if they are valid; (*b*) by what adjustment the objections may be avoided and the advantages retained.

READINGS

CARPENTER, BAKER, and SCOTT. The Teaching of English, chap. vii, pp. 142, 242.

KENNEDY. Fundamentals in Methods, p. 138.

KENDALL and MIRICK. How to Teach the Fundamental Subjects, pp. 95–100.

CHAPTER XXIII

MOTIVES AND INCENTIVES

Motives defined. No work in the physical world or the mental goes on without motive power. All activity is but the discharge of energy. Energy drives the train along the track or piles up destruction in the wreck; blasts a tunnel through a mountain or a hole through a battleship; plans a crime, writes a book, or utters a prayer. Every activity of a pupil, good or bad, is fundamentally a discharge of energy. The child is primarily a dynamo, a mechanism for bringing forces to school and releasing them. He comes supplied with all the motive power necessary to make the school work go. The teacher has no need to concern himself with a problem of "supplying motives" if by motives we mean the forces which drive.

Motives, in this sense, are impulses incessantly impelling the child to activity. They are not matters of theory, of pedagogical ideals, of method, or of organization. They are not incentives, which are external stimuli, as shown later. They are facts, dominant facts of child life, present and potent, whether we will or not, whether we recognize them or not. They are neither good nor bad. Like electricity or dynamite, they are forces having no moral character in themselves but capable of limitless good or bad, according as they are directed in harmony with or in antagonism to the interests of society. All motives are subjective, internal, and natural.

Classification. The motives, then, with which the school has to deal are all the instinctive tendencies of childhood

with all their variations and modifications acquired through experience. They diverge, converge, overlap, and intermingle endlessly. In truth, they are not different forces but different aspects or manifestations of the same infinitely complex driving force, of vital energy, — *of life*. The child that is "full of life" is full of motives and full of activity. No classification of these aspects of life energy, of these impulses, can be final or correct to the exclusion of any other. Any inherited tendency which can be discovered with sufficient distinctness to be named is an instinct. Similarly, any attitude, habit, interest, or other acquired tendency which is effective for directing or arousing conduct of any sort may be regarded as an impulse or motive, and any listing of such tendencies which serves a useful purpose is legitimate.

The following classification of motives will serve for the present discussion to point out those aspects of child energy with which we are particularly concerned.

I. Individualistic or Self-Seeking Tendencies

1. Virility — aspiration to "be a man," to be big or superior; and its counterpart, femininity — to be attractive, admired, and womanly; self-esteem.
2. Obedience or submission to guidance and protection, changing, especially at adolescence, to self-reliance and independence.
3. Self-assertion, combativeness, insistence on "rights."
4. Greed, acquisitiveness, ownership.
5. Pride, envy, and jealousy.
6. Partiality for one's own, — as one's parents, family, friends, and possessions.

All these are more or less modified by and are even dependent on the following:

II. Social or Group-Serving Tendencies

1. Fear of disapproval of others.

2. Desire for the approval of others, especially of one's peers.

3. Coöperative impulse, seeking mutual welfare.

4. Spirit of service, complete unselfishness.

III. Tendencies which Motivate School Work Directly

1. Love of mental activity; of sensory experiences, imagery, of rational and emotional processes of every kind.

(*a*) Interest in any situation which appeals to one as a *problem* of significance; curiosity, experimentation, puzzle-solving.

(*b*) Interest in the new, unusual, vivid, striking.

(*c*) Interest in human beings — their doings, history, customs, emotions — and in personified things.

(*d*) Tendency to organize ideas, form concepts, classify, systematize.

(*e*) Love of emotional excitement, whether occasion be joyous, exalting, sad, horrible.

2. Love of physical activity.

(*a*) Play, dramatization, impersonations, etc.

(*b*) Constructiveness, love of achievement, attainment, accomplishment, overcoming difficulties.

(*c*) Restlessness, organic need for much bodily movement, physical energy, vigor.

3. (*a*) Tendency to *imitate* certain observed or suggested movements, expressions, thought processes, and emotional attitudes.

(*b*) Tendency to *repeat* acts and experiences which are agreeable.

IV. Æsthetic, Ethical and Religious

1. Love of beauty, harmony, rhythm, rhyme, etc.
2. Moral impulses, love of doing right, conscience.
3. Admiration for moral qualities in others.
4. Reverence, worship, religious aspiration and exaltation.

All these are teaching resources, ready for use or easily aroused. They are the springs of action which the teacher must direct if he would govern or teach. According as it is directed the same impulse may impel the child to the most virtuous conduct or to the most vicious. The same innate motives may drive him successfully through all the tasks of school years or they may drive him out of school.

The child is a social being. Both pedagogical discussions and school practice have usually assumed that the efficient forces of child life are individualistic, such as are named in our group I, or even more primitive and animal-like impulses than these. The truth is that the impulses of our second group will completely overshadow and smother out those of the self-seeking sort if given a reasonable chance.

Interested in school work directly. Quite as blind as the failure to recognize the social motive in children has been the oversight of the fact that children normally do love well-adapted school work for its own sake. While much of our arbitrary and abstract subject matter and much of our unnatural methods of teaching are indeed distasteful, no one who has studied children actually at work in a modern well-taught elementary school can doubt that such interests as we have listed in the third group are present and active in the great majority of the children most of the time. The children commonly do not work because of any extraneous incentive whatever. They work because the task is pleasant in itself and is the strongest immediate interest. These tendencies may indeed be starved or perverted, or

they may be discouraged by disagreeable effects following early efforts at expression in school, such as being required to "speak up" when they have nothing to say or "shut up" when they want to say something, but they are none the less real and efficient if wisely managed. As further discussion of this matter would intrude upon the premises of teaching methods, we shall turn to the social motive and attempt to establish its validity as a basis of government.

Normal motives social and mixed. In very young children, in those of abnormally low intellect, and in any person under stress of passion or of physical needs, simple, primitive, and individualistic impulses ordinarily dominate. But civilized persons in normal activities are governed by impulses more or less mixed or blended and mainly social. We are first of all members of society. Even our most selfish aims in the business of life seek for us social pleasures, popular approval, and distinction in the eyes of the public. Our means of attaining these social ends are likewise fixed by society rather than by ourselves. Our labor is done to satisfy some need of the social organism, and we are paid for our efforts by society at a valuation fixed by itself and in coin of its own determining.

Forms and evidences of social control. The *fear of disapproval* manifests itself with the first "self-consciousness." No fear of physical punishment is more keen than the dread of ridicule, of being called "fraidy-cat" or "sissy"; of being forced to wear curls or kilts after one's fellows think they should be discarded, or a style of dress that "nobody's wearing now." This fear of the disapproval of one's peers is what makes effective "the rules of the game," whether of "I spy," football, poker, or stock speculation. It selects our clothing, our automobiles, and our college; it determines the choice of our words, the steps of our dances, and almost the last detail of our work and of our recreation.

On the positive side, the *love of social approval* is the force which drives the wheels of the world's work — except, as has been said, under pressure of strong emotion or physical want. It is the heart of all social, literary, financial, and political ambition. It is the essence of leadership and of competitive activity. The fear of disapproval prevents wrongdoing; the love of approval wins victories. The one restrains within the bonds of propriety; the other impels to achievement. Together they give morality and efficiency; they make one's very selfishness social.

Self-interest is more completely socialized when society is no longer regarded as a sort of external and antagonistic *alter ego*, hedging individualistic impulses, but has become thoroughly identified in interests with the narrower self. When the individual is so merged into the group that he finds his pleasure and profit in its gains and his griefs in its misfortunes, he has attained *the coöperative stage*. This "enlightened selfishness" means genuine teamwork without the grand-stand plays. It is the bond of the much-discussed "gang spirit" of adolescent boys. It is the substance of the Boy-Scout movement. It will lead a boy to submit to any suffering rather than "peach on the gang." It will cause him joyfully to endure unlimited severity and monotony of training before a football contest and the most painful bruises and fractures in the course of the game — all for the success of the team. Later in life his partnerships, his church, his secret orders, are manifestations of the same impulse, but it is never stronger or more faithful than in adolescence.

Yet more exalted is the unselfish *spirit of service*. Here primitive individualism has wholly abdicated to the social impulse. Little children love to give their pennies to the far away heathen with no thought of return. They are happiest in doing acts of unmixed affection. To be sure, their

impulses, social and individual alike, are objective and fleeting, and they are lacking in a fixity of purpose that only experience and developed mentality can establish, but it is slander to assert that their motives are not often as purely unselfish and generous as the best of our own. It is a sad mistake to insist upon intruding a material and selfish reward upon the child when his good deed is its own sufficient reward. In adolescence this spirit of service is in its most beautiful flower. Then are lives freely dedicated to social, religious, or other unselfish causes. The price of personal sacrifice is rather an added incentive than a deterrent.

Multiple social groups. Parallel with the varying degrees in which the self is merged into society, we should note the different groups which call forth the social response. There may be several of these simultaneously without necessary conflict. A man may be a devoted member of his church, his firm, his political party, and his various fraternal organizations without inconsistency. Only when his groups conflict with each other must he choose between them. So a boy may be loyal to his family, his class, his school, his gang, his team, and his fraternity. That in his loyalty he should occasionally adhere to the gang in preference to the school is due to two facts: first, that there is antagonism between the two; and second, that the gang is more in accord with his nature. The antagonism may be due in part to evil tendencies in the gang, but the gang's hold upon him is due to its essential boyishness. The former is incidental, the latter is fundamental. The evil may be eliminated from the gang, and the boyishness may be brought into the school activities.

Sympathy limited by knowledge. The range of one's social sympathy is measured by the breadth of his knowledge and experience. Travel is the cure for sectionalism, and knowledge for narrow prejudice. The same social impulse

may develop into a neighborhood feud, state loyalty, national patriotism, or service to mankind. Partisan prejudice is the signpost of the limit of one's knowledge. A chief responsibility of the schools which society maintains is to broaden the pupil's sympathies and to quicken his social consciousness.

Success of socialized school work. There are available many interesting detailed accounts of the socialization of work and play in school. In such works as the Year Books of the Francis W. Parker School and in Scott's "Social Education," Dewey's "Schools of To-morrow," and in other books and periodicals, we have a revelation of the springs of efficient and happy learning that makes one wonder whether our whole traditional system of organization and studies is not a grotesque blunder. Children have struggled so laboriously and uninspiringly for pitifully meager results, while the pupils of those radical schools seem to be playing their way into rich experiences and large abilities. But we must forego the temptation to introduce descriptions of these striking types of the socialized school. We are concerned rather with that more conservative use of the social motives which may be applied by any teacher in any school with any schedule or course of study. We must meet the teacher's chronic excuse — "no time for that sort of thing" — and the superintendent's confidential complaint — "no teachers capable of that sort of thing." Still it is true that the right sort of will has always managed to find some sort of way, and superior wills rather than superior means have accomplished all that has been done.

Methods of using the social motive. *The key to social motivation is group coöperation in the solution of genuine problems.* In discussing the organization of the school, the establishing of routine, the grading of exercises, and elsewhere, we have found that this key opens the door to both simplicity of government and increase of educative values.

Practically, if not fundamentally, every problem of the course of study through which the child must work his way is a genuine problem for his solution. Its introduction into the course may have been arbitrary and unnatural, but it is none the less his problem if it is there. Therefore, without venturing into that attractive wilderness of selecting a content which will be self-motivating, we may consider the motivation of the traditional school tasks.

Group competition. It is noticeable in school fairs and exhibitions that almost any child is more intensely interested in the contests of his class or his school than he is in those in which he is an individual contestant. Few children are more anxious to see their own names on the honor roll than they are to have their class win a competitive distinction. A manual-training or map-making project or study of some practical local problem by a group arouses far more interest and activity than solitary efforts of the same sort. Each pupil gathers enthusiasm, knowledge, and lasting impressions from all, and all from each. Only let each pupil recognize that *his personal problem is to attain a certain ability* rather than to "get over the lesson," and instead of our demanding that each get up the lesson without help we shall soon discover that self-organized coöperative study is best for both weak and strong and is more truly educative than a large proportion of the recitations that teachers conduct.

Contributions to the class group in "content" studies. Daily recitations particularly are suffering from lack of social motivation. In any "content subject" there is abundant opportunity for individuals to make genuine contributions to the knowledge of the class. Let each pupil offer to the class any interesting facts which he may have gathered in the library, at home, from his neighbors, from the teacher, or wherever he can. Let the class as well as the pupil know that this is their only instruction on these points and hold

them responsible for it. The pupil is not assigned a topic on which he is *to recite to the teacher* but one on which he is to find out what facts he can and get the class to know them. He has a genuine audience to address and they a genuine necessity for listening. Together they are a genuine social organization for mutual progress. It is well for him to review and test the class on his topic. One who has not observed such a recitation cannot appreciate the increase of earnestness and intelligence of study, clearness of topical organization, forcefulness of expression, which result from this change of attitude among the pupils. Incidentally, far more material is presented and more active discussions are aroused. As these reports by pupils constitute the exposition and illustrations of the textbook skeleton of the lesson, the latter may be learned almost incidentally and needs but to be reviewed and properly emphasized by the teacher. Even this may be done by the pupils in more advanced classes. As in the plan for grading exercises, already discussed, there is an attitude of active challenge toward the work of a peer which is wholly lacking in the acceptance of authority from the teacher and text. By being held responsible for the knowledge of the class on his topic the pupil soon learns the value of definiteness of viewpoint and clearness of presentation. Better language training can hardly be conceived. From primary pupils to college seniors such socialization of the study and recitation will prove effective if gradually and appropriately introduced — not "adopted" as a system.

For best results pupils should have some choice in the selection of topics. The socialization may be still further accomplished by assigning occasional larger and more complex tasks to groups of pupils. Such groups should be largely self-organized and self-directed. If a genuine responsibility rests upon them, it will be found that they will soon bring pressure to bear upon the shirkers and in course of time

will seek to drive out the drones from their busy hives. The teacher, of course, does not abandon them but constantly studies the working of any plan he uses and adjusts it to meet difficulties as they arise.

In "form" studies. In formal subjects not only may the same plan be utilized for the solution of more difficult problems, for bringing in practical problems from the home, farm, or shop, but there is a particularly happy opportunity in the eliminating of troublesome deficiencies.

Remedying deficiencies. In every class there are individuals deficient in particular abilities—in spelling, multiplication, writing, or other capacity. If the teacher has interpreted the course of study into abilities to be attained rather than ground to be covered, as we have elsewhere outlined, and the particular ability demanded of the grade has been made entirely clear to the pupils themselves; if they have been shown how vitally that ability will enter into all their subsequent work, how the lack of it will increase their labor and retard their progress at every point, — they will welcome the suggestion of a voluntary "multiplication club," "spelling club," or a "penmanship-improvement association." These are social groups in the best sense, self-organized, self-directed, seeking to meet a very genuine and pressing need. Their mutual stimulation and helpfulness accomplish results in weeding out deficiencies as the solitary drilling of a deficient and discouraged individual cannot hope to do. Every teacher knows that he who is asking the questions is commonly getting better drill than one who is answering them. Most mere drill work can be conducted by pupils as well as by the teacher, and often by a deficient pupil with maximum total values.

Group self-correction. An excellent plan for social cooperation of a different sort in eliminating common errors of speech is described by Kendall and Mirick.[1] A teacher

[1] How to Teach the Fundamental Subjects, p. 63.

was asked to prepare a list of such errors made by her class. In the true social spirit she asked the children to help. For two weeks each child was a detective, listing every error he heard in or around the school. These lists were classified, and correct forms were put on the board and drilled upon. Then each child became a policeman to enforce the laws of good usage. Then competitive groups in correct speech were organized on the pupils' initiative and daily bulletins posted. "Thus by the end of about five weeks these pupils had become thoroughly alive to the values in words and sentences, and the teacher very wisely dropped this particular feature of language training before interest flagged, transferring the interest to the composition lessons." Note that last statement.

The success of such socialized incentives will depend largely on the teacher's knowing how to suggest rather than direct, to hint rather than tell, to respond to calls for guidance rather than intrude plans, and in knowing when to turn flagging attention to a new task or to a new means of attack on the same problem.

Social shortcomings of family and school. In summary, we may assert unqualifiedly that school children are primarily social beings; that social impulses are not only present and competent to direct school work and conduct, but that these forces are the dominant ones. Only the failure of family and school government to adapt themselves to this supreme fact of child nature can account for the widely prevailing idea and oft-repeated statement that children are fundamentally selfish and nonsocial. Their inferiority to adults in the social spirit, if it is true at all, is merely in the lack of experience, of a background of habits and farseeing purposes — deficiencies which characterize all their other impulses as well and which it is the responsibility of the educative process itself to correct. Nevertheless, as Irving King has put it,

The school has tended to deal with its children as individuals, when they are in reality social beings. It has tried to train them as individuals in the virtues of truthfulness, justice, loyalty, fair play, and lawfulness. As abstract statements these mean nothing to the children, but, when illustrated by the intimate associations of the playground, gang, club, or school itself, they stand out with convincing force.[1]

Principles of motivation. A few guiding principles which will aid in determining the choice of motives may be given:

1. *No motive is good unless it motivates.* It is the softest of "soft pedagogy" to allow a duty to remain undone because an appeal to a lofty motive brings no response.

2. *Tendencies strengthen by their exercise.* Of several impulses, give practice to the one that needs to be developed rather than to one that is already objectionably conspicuous; for example, arouse the courage of the timid child and the modesty of the brazen one.

3. *Arouse higher motives in preference to lower.* The latter are primitive, deep-rooted in our subhuman antecedents, always present, easily actuated, and will take care of themselves. The former are efficient but easily displaced and need development. Do not permit a child to perform a task through selfish rivalry which he will do through coöperation or æsthetic interest.

4. *Higher motives must grow,* slowly, through long exercise, nourishment, and encouragement. They cannot be taught or given, nor can they grow through neglect or disparagement. Because a child "lacks a sense of honor" is reason enough for trusting him as much as possible. Through little victories only does he gain strength for bigger ones.

[1] Education for Social Efficiency, p. 145.

5. *Make permanent rather than temporary connections.* With a given sort of activity seek to connect the impulse which should always motivate it. Composition work should be done through a genuine desire to express thought, and the study of literature through a love of its beauty and its dramatic interest. These should not be unnecessarily supplanted by a temporary rivalry for grades nor by a group incentive.

6. Ideally, *each task should set off its appropriate motive directly.* In Nature's education this is true, and it would be true in an ideal curriculum taught with ideal methods. This is the ultimate standard of economy and efficiency. Students of childhood are coming surely to agreement on the conclusion that any activity so foreign to the native impulses of the child that it cannot directly stimulate an effective motivation is by that fact not adapted to the stage of the child's development. Intellectual tastes, like tastes gastronomic, are normally good indices of one's real needs, but both are easily perverted. Motives thus directly called forth by the work itself, instead of by a mediating incentive, are reasonably sure to be wholesome and well adapted.

Meaning of incentive. Restricting the use of *motive*, as we have, to its original and principal meaning, we shall likewise use *incentive* in its original sense as "that which strikes up the tune," sets off the activity, stirs up or incites the motive to action. The motive is the driving force; the incentive is the device which couples it to the task to be performed. This distinction kept clearly in mind would help to clear up much current confusion in technical discussions as well as in practice.[1]

[1] A careful comparison of the uses of the terms *motive* and *incentive* among writers on education shows a serious lack of agreement. Popularly and in most books they are used interchangeably, while works on school management have generally made the word *incentives* cover, with various differences, the whole field discussed in this chapter. White distinctly

Use of incentives. The common error of the unscientific teacher is to assume that the incentive affects the conduct directly. He is content to measure the efficacy of a prize by the number or quality of essays written for it, oblivious whether the motive aroused was greed, rivalry, class spirit, or love of expression; whether the winner increased more in pride of conquest than in literary interest; whether the result is more or less of permanent tendency to give literary expression to one's ideas.

Where there is a child there are motives in abundance. Where there is a school there are tasks to be done. Idleness and retardation are the results of tasks nonmotivated. Mischief and disorder are due to motives without tasks. School government and teaching is the business of connecting child-motives to educative tasks, finding a safe outlet for the one and an effective force for the other.

Incentives are all the devices known to teachers for making these necessary connections. They include marks, promotions, honor rolls, rewards, prizes, and punishments, — all schemes intended to bring school activity to the plane of genuine *work* by affording an aim outside of the process itself. They also include contests, games, dramatization, excursions,

states that "the desires that thus incite or impel man to effort are called motives or incentives," with a note that incentive is used for either a desire or its object. Bagley, although criticizing White on the ground that the child must be educated "when he is unable to see very far ahead," defines incentive as "the idea of a remote end toward which effort is to be organized," and then speaks of pain stimuli as incentives.

Neither White's classification of incentives as *natural* and *artificial* nor Bagley's as *positive* and *negative* will bear thorough analysis, nor does either prevent its author from bringing into his discussion incentives that are neither *ideas* nor *desires* nor the *objects of desires*. Both statements fail in detailed application and have led to much confusion on the part of numerous writers who have followed them. Similar difficulties are readily noted in Dutton, Salisbury, Colgrove, Arnold, and others. The distinctions in this chapter have proved useful in the author's own classes, but cannot be further defended in the space here available.

and other devices seeking to make the process itself attractive and thus approximating the character of educative *play*. Even so, much of the pupil's daily work still remains on the plane of *drudgery* — disagreeable and unmotivated.

Classification of incentives. Marks, passes, promotions, graduations, and degrees are expected to set off the motive forces of ambition and love of approbation. Their chief defect is that they commonly supplant the natural interest in school work and bring pupils to measure the worth of all efforts in percentages and credits.

Honor rolls, distinctions, and other intangible individual rewards arouse rivalry or emulation. They are mainly anti-social and can ordinarily appeal to but the few who least need their stimulation, unless they are made so common as to be of little appeal to any.

Tangible rewards and prizes have the same defects as the intangible and the further defect that they may appeal to selfish greed, jealousy, or baser motives and reactions.

Commendation is a gentle, wholesome stimulus, with no bad effects if wisely given *for effort*, which the child controls, and *not for native ability*, which is an hereditary gift. Censure is as depressing as commendation is bracing. Censure may serve as an effective restraint at times, but is not to be compared in efficiency with an effective redirection of the errant energy.

All punishment is repressive and depressive. It is sometimes discussed as the use of "negative incentives."

Principles of incentives. We may sum up our viewpoint as to incentives in the following principles:

1. The best use of incentives is their elimination. This is in the same sense that the highest service of the teacher is to make himself unnecessary. The term "natural incentives" is sometimes applied to this direct motivation of work. In our meaning of the term all incentives are "artificial."

2. Give preference to the incentive which is temporary and easily effaced. Its function is to *make* the connection between motive and task, not to *be* the connection.

3. No incentive is good in itself, it must be judged wholly by its effectiveness.

4. Never permit the incentive to become the end and the educative process the means. A high-school pupil happy to throw aside forever his Shakespeare and history as soon as he secures his diploma is a shocking illustration of the confusion of means and ends. Study is not a means to getting a diploma, but the diploma is a means to stimulating study.

5. Avoid elaborate, complex incentives which divert attention and energy from the work; machinery which consumes the power. Such are most "systems" of marks and "merits" and the more cumbersome student-government organizations.

6. Incentives derive their effectiveness from the social mind of the class. Promotions, distinctions, rewards, and punishments are effective in proportion as they are *respected*. A whipping may be a joke, a matter of pride, a challenge to combat, or the deepest humiliation. Remaining after school to straighten up the room or to get a missed lesson may be regarded as a coveted privilege or a dreaded disgrace according to the associations established by class traditions.

7. A given incentive may have entirely different effects on different pupils under the same circumstances or on the same pupils under different circumstances. Commonly there must be a differentiation by the teacher as to the application of the incentives among the pupils.

It is the business of the teacher to oversee and foresee the operation of motives and so to manipulate incentives as to attain the most educative results. Not disciplining

children nor transmitting knowledge is the business of teaching, but wisely choosing motives and "giving the tune" to each so as to bring them into one grand social and spiritual harmony.

PROBLEMS

1. Compare the distinction between motives and incentives as given in this chapter with those given or implied in other works.

2. Compare the classification of motives with other lists of the sort. What aspects of impulse seem to be emphasized in each?

3. Observe individual children at work in school and out and try to determine what sort of interest or impulse is impelling in each case. Where you think the motives are mixed, seek to analyze them into as elementary factors as possible.

4. Describe cases in which the teacher found it necessary to find some specific incentive for a particular task. What incentives were used? What others in each case might have been used?

5. Find instances, if you can, of the use of incentives (*a*) which are not effective for the purposes intended; (*b*) which tend to distract the attention from the task or lesson to the incentive rather than to fix the attention directly on the lesson; (*c*) which affect different children in different ways.

6. Find instances (*a*) where you think a higher motive than the one used would have been as effective for the purpose; (*b*) where the motives used seem to be objectionable because of the traits of character they tend to develop; (*c*) where the motives are themselves desirable but not as effective as they should be for the immediate purposes.

7. Describe some cases in which the teacher has used some extraneous incentive to get the attention and interest of the children but presently the interest has passed over wholly into the work itself.

8. Find as many different forms and applications as you can of the social motive in school work.

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CHAPTER XXIV

PUNISHMENT

Negative incentives. Disapproval, threats, and punishments are often called "negative incentives." Their purpose is not to arouse but to inhibit the functioning of some motive. Instead of "giving the tune" they put a quietus upon it. If education means the act of leading out, of unfolding, of developing, then negative incentives *a priori* are not educative. There is no growth through nonactivity, no education in stopping activity. Children do not learn by what they are prevented from doing nor by what is done to them. They learn only by their own actions and reactions. It is the reaction aroused that counts in the case of the negative incentive. This is not always the sort that is assumed by the teacher.

Punishment through the ages. From the dim dawn of Egyptian civilization comes the proverb, "A young fellow has a back; he hears when we strike it." Among the earliest Hebrew proverbs we have, "Foolishness is bound up in the heart of a child; but the rod of correction shall drive it far from him." From those primitive days to the present, "practical teachers" and "strong disciplinarians" have been emphatic in precept and practice in making the rod the symbol of education.

On the other hand, the greatest teachers and thinkers of all times — of Scripture, of literature, and of educational history — have both practiced and advocated lenient methods. Not on account of some soft sentiment or fear of brutalizing the child have they taken this position, but because teaching

through punishment is hopelessly inefficient. Plato wrote: "No study pursued under compulsion remains rooted in the memory. Hence you must train children to their studies in a playful manner and without the air of restraint." Among the stern and harsh Romans, Martial, Cato, Cicero, and Seneca protest against the policy of ruling by the rod. Quintilian, the great Roman teacher and the only important writer of ancient times on practical school government, makes a most notable plea against severity in school discipline. Vittorino da Feltre (1378–1446), the next teacher of children to rise to historical distinction, was renowned for his avoidance of physical punishment, for the self-government of his boys, and for a school spirit that caused his institution to be known as the "Pleasant House." La Salle's "Conduct of the Christian Schools" (1720) gives elaborate rules for the infliction of penalties worked out in amusing detail. But in 1811 these Brethren of the Christian Schools considered prohibiting corporal punishment, and in 1870 Frère Philip said for them, "Imperative circumstances no longer permit us to tolerate corporal punishment in our schools."

In modern times the list of those who denounce corporal punishment as a means to education is practically identical with the list of those who have contributed materially to educational progress. Meanwhile the tens of thousands of forgotten teachers have maintained the rule of the rod and the sway of the switch and have persisted in misquoting Scripture to the effect that sparing the rod *per se* spoils the child.

Principles of punishment. We may organize our discussion of punishment into the following principles:

1. Punishment primarily means to cause pain. This can have no value in itself and must be justified, if at all, on the ground of efficiency in obtaining conditions more favorable for educative work.

2. Mere submission, sullen or servile, is not a condition favorable for educative work. It is more often wholly incompatible with learning, and yet it is often mistaken for an indication of the efficacy of punishment inflicted.

3. Punishment of school children cannot be justified on any theory of retribution. It is permissible only as it may deter the punished one or others from objectionable conduct and thus make desirable conduct possible. No pupil "deserves" anything at the hands of his teacher except helpful encouragement and wise training.

4. The best possible deterrent of wrong conduct is right conduct. No amount of punishment will prevent hands that are idle from doing the devil's work, and no amount of devil will get wholesomely busied hands into mischief.

5. Punishment cannot in itself be an incentive or motivation for mental work. The motivation is still to be accomplished when the punishment has made conditions favorable for the work.

6. *Must promote affection.* Punishment which brings the child and teacher into more sympathetic, friendly, and mutually trustful relations is good, regardless of its form or its severity. That punishment which ends in sullenness, resentment, lack of confidence in the teacher, a feeling of injustice or unwillingness to coöperate, has been a failure regardless of refinement or brutality.

7. Radical as the statement may seem, the one test of successful punishment is that it meets the approval of the punished. Usually children may be brought to see the justice of any right punishment before it is inflicted. They will even seek it through some innate sense of compensation. At any rate, the incident should not be considered closed until the corrected child has been drawn nearer to the teacher than ever before, until there is a closer heart to heart touch between them and more of mutual confidence,

affection, and trust. Only then has punishment been effective. Like a surgical operation, punishment is permissible only under pathological necessity and is to be judged by the subsequent health of the patient. The teacher who is content to punish a child "because he needs it" and consider the correcting thus accomplished has even less excuse than a surgeon who would perform a serious operation and leave the patient to his own resources to recover from its effects. It is not an operation that the patient needs, but health, not punishment that the child is in need of, but right relations with the teacher and with his fellows.

8. Punishment "as an example to the school" likewise can be measured only in terms of the permanent attitude of the children toward the teacher and toward their tasks. Immediate results are very deceptive. "Obedience," "submission," and "maintaining authority" are likely to cover the children's retreat to subtler and meaner disobedience and defiance of authority.

9. "*Lightning principle.*" Punishment which must be constantly repeated to be effective, by that fact proves its inefficiency. Work done under continuous or repeated compulsion has slight educative value and engenders a repugnance which usually does more harm than the work does good. A small boy on being asked why lightning never strikes twice in the same place, replied, "It does n't have to." Effective punishment, likewise, does n't have to strike repeatedly in the same place. Children do not respect the sort that does have to. Penalties lose their efficiency as they become common. When "nothing but a licking will control that boy," it is certain that the licking does not.

10. Punishment arising from the teacher's temper, temperament, or nervousness, whatever the irritation or provocation, or inflicted for any other reason than a sincere and sympathetic belief that the child or the school will be

benefited thereby, is not a question of school management at all. Such punishment belongs in the same category and deserves the same consideration it would have if inflicted by the irate teacher upon a fellow teacher or other citizen outside of the schoolroom. Morally, psychologically, and legally, if only it were possible to prove it, such an act is neither more nor less than a crime.

11. Except for the criminal sort just mentioned, corporal punishment is not necessarily any more brutal or brutalizing than keeping-in, nagging, scolding, and many forms of the so-called "moral suasion." For small children particularly, physical pain is as prompt a corrective and open to as few real objections as any punishment that can be applied, provided always that the spirit of it and the conclusion of it accord with the principles already stated.

12. *Last resort or first aid?* Corporal punishment should never be regarded as a last resort—tradition to the contrary notwithstanding. It is so immediate and tangible that it is often the most effective and refined "first aid" to cure a child's sullen or intractable mood. A prompt and kindly switching, particularly by a mother or primary teacher, will often bring a little one to repentant tears and affectionate embraces in a few minutes, with no sting of humiliation and with no rebellious mood settled into a habit. A "spoiled child" may be brought to his senses, a mischievous conspiracy nipped in the bud, or a "bully" posing before the class as superior to the rule of the school may have the tables turned on him by rapid-fire corporal correction. A child who knows that all other means of governing him have been tried and have failed and that mere brute force is the teacher's sole effective authority—the last resort—does not respect that government even though for the moment he may submit to it. He is being taught what all civilization is seeking to make untrue—that physical force makes

ultimate right. Most assuredly he will exercise that right whenever and wherever he believes that he possesses it. When physical coercion is a last resort it is no resort for school use. The unhappy child who has been governed all his life by beatings, whose parents have found that "the only way to do anything with him is to whip him," is hopelessly immune to educative benefits through physical compulsion. He, more than most children, is susceptible to the leading of genuine sympathy, appreciation, and trust. At any rate, nothing else can lead him. One who cannot reach such a child except through corporal punishment simply cannot reach him at all.

Corporal punishment, like a powerful drug, is immediate and severe in its effects and for that reason must be used with particular discrimination. If used at all, it should be used promptly and thoroughly before the disease is complicated or aggravated. Continued use is the surest sign of misuse. Many school boards prohibit it entirely. It is better to give teachers full authority to use the rod and then remove those who often find it necessary to do so.

13. *Penalty schedules.* Punishments predetermined by rule to fit designated offenses not yet committed appeal to many teachers as "fair for all alike" and may be approved by the children for the same reason. But rules cannot consider the spirit in which an offense is committed, the different natures of children, home influences, special conditions, and momentary temptations. The same offense cannot deserve precisely the same punishment on different occasions. Nor, which is more to the point, can the same penalty have precisely the same effect on different children. One may be overcome with agonies of humiliation, disgrace haunting his waking hours and terror his sleep, while another philosophically considers the prescribed penalty a fair price to pay for his fun or for his stupidity in getting caught at it.

The ascribing of definite penalties to definite offenses tends to cause children to regard the offenses as a list of pleasures with prices attached. If one breaks a rule, the teacher owes him a penalty; if he gets a penalty amiss, he has but to break a rule to get even. Furthermore, it is human nature to believe that the thing which has a price is a thing of value and to be desired.

In this connection it may be justifiable to digress for a word on the psychology of specific prizes for definite tasks. Here the prize is the good thing of value to be sought and the lesson the hard thing or penalty which must be exchanged for it. The same boy who would whitewash a fence to get money to buy a jackknife would trade the jackknife for the privilege of whitewashing the fence if a Tom Sawyer were at hand to manipulate incentives. A wise generation of teachers, instead of *making* the child clean up the blackboards because he does not know his lesson, *permits* him to clean the blackboard because he does know his lesson.

14. *Educative aspects.* The only educative aspect of punishment consists in the association established in the pupil's mind between the objectionable conduct and some disagreeable, inhibiting idea. If the association is close, clear, and infallible, the disagreeableness spreads to the idea of the conduct and ultimately tends to inhibit it directly. If, however, the offense is sometimes undetected or unpunished while punishment is imposed frequently by the same person for various offenses, the association is made between the disagreeableness and the teacher rather than with the offense. Thus the teacher comes to be dreaded as the inevitable evil, while the offense is a sort of sporting risk. The forbidden conduct, according to the law of association of ideas, comes to be *per se* a thing to be desired; the penalty, a price to be paid with always a gambling chance to avoid payment if one is not caught. Sufficient skill in beating the game and

avoiding detection brings the same temptations it does to a professional gambler.

The obvious adjustment to this psychological situation is, first, if at times one be compelled to resort to punishment, he must the more often and vividly impress himself upon the child in pleasant and kindly relations. Do not let the teacher be identified as a punisher nor the school as a place of punishment. Second, punishment must not be used as a preventive unless there is practical certainty of its being applied every time the offense is committed. If the punishment is dependent on the chance of detection, it is a challenge rather than a preventive. *Make the offense and the punishment inseparable.*

15. *Natural punishment.* Unlike other forms, "natural punishment" is in itself educative. This consists in letting the child suffer the penalties imposed by the laws of nature or of society, letting him take the consequences of his act. If he overeats or exposes himself, let him be sick and thus learn better. If he climbs too high, let him fall. If he tears his clothes or loses his toys, let him mend the damage or suffer the loss. This policy has the enormous advantage of reasonableness. Penalties are not associated with the teacher, and wrongdoing no longer has the artificial sweetness of forbidden fruit. Practical lessons of natural and social laws are learned with a clearness that no telling can impart. More than all, there is established a sense of one's responsibility for his own conduct.

But nature's penalties are too uncertain, too erratic, and often too severe. Her retribution for playing with guns, fire, and railroad trains does not accord with our idea of justice. It is too unevenly and too irregularly inflicted. The punishment quite often precludes the possibility of reform on the part of the offender. Again, a large proportion of nature's and of society's penalties are deferred too long to remedy

the evil. Many are evident only in old age or in "the third and fourth generation." Many are so gradual and indefinite and so complicated with other circumstances of life that ages of human experience have been necessary to discover the connection of cause and effect. Wherefore coercion is often necessary to supplement natural punishment. If nature were really a good teacher, we would have no need for schools or pedagogy.

If the natural penalty is sufficiently near and not too dangerous, it is very wise to allow it to take its course. But the relation between cause and effect must be made very plain. The child is entitled to full and fair warning. But it is important to discriminate between the *chance* of injury and the *certainty* of it. To say "You will be hurt," when in nine cases out of ten the warning is disproved by the event, is to discredit the teacher's veracity and destroy the very sense of responsibility which natural punishment seeks to establish. To say "You might be hurt," explaining fully the improbability and unexpectedness of the penalty but balancing this against its severity, is to establish a profound respect for the warning and for the policy of "safety first."

In school management *natural* punishment must usually be *artificially* imposed. Some typical instances may be the following: If a child wastes his schooltime in play, he must make up the school work in playtime. If he is disorderly in the enjoyment of a privilege, he is deprived of the privilege. If he makes himself objectionable on the playground, he is not allowed there. If he spoils the games by his quarreling or unfairness, he is kept out of them. If he does his work carelessly, it is not accepted and must be done again. If he destroys his own possessions, he must go without them. If he injures others or their property, he must make good the loss, and this not from the parental purse but by deprivation of something that he could otherwise enjoy.

Grotesque misapplications of the principle occasionally occur, as when a teacher compels a child to eat half a dozen lunches because he has eaten his own before time, or requires him to chew a wad of paper before the class because he has been caught chewing gum, or washes out his mouth with soap because he has used foul language. Nothing could well be more *un*natural than such penalties.

16. *Social penalties.* Finally, as we have seen that the social motive is the most effective for work, so the most effective and permanently valuable punishment is that inflicted by a group of one's peers. Puffer and other students of children's groups have given innumerable instances of the complete efficiency of the penalties inflicted by members of a group upon one who had violated some rule or standard of their adoption. It has been found that expulsions by college students under an honor system of government are less erratic and more uniformly just than those by faculty action. Numerous cases of punishment imposed by the children of classrooms in the public schools upon their own members show the same gratifying results. Penalties inflicted by the children, whatever the formality or the informality of the group government, are usually more just, because evidence is more freely obtained and motives are much better understood and appreciated by the children than by the teacher. They are more effective, because the social disapproval itself is more dreaded than any deprivation and often makes other correction entirely unnecessary. They are accepted by the punished one as a "square deal," because he realizes that they are not arbitrary and do not arise from partiality or temper. They do not create friction between school authorities and parents, for even parents recognize the justice of them. They enable the teacher to take a helpful and kindly attitude toward the erring one, often to become his advocate and thus gain a stronger hold upon

him and save him for the school and for society. They prevent the social sympathy of the class from going out to the child as against the teacher, making the one a hero and the other a tyrant in their sight. Social punishment is natural punishment and gives an insight into the working and spirit of government. It accords with the spirit of all the principles we have formulated. Its preventive effect upon the class is the best possible, and the educative value in training the moral judgment and in the development of an *esprit de corps* on a high plane cannot be surpassed. Furthermore, all the teacher's power and authority are held in reserve for use in case the class conduct should go astray, gaining in dignity through its unused and unknown possibilities.

As expressed by a writer in the *Outlook*: "Apparently the philosophy of the thing is this: When punished by your teacher you are a martyr in the eyes of your fellows. When punished by your fellows you are a disgrace to their community."

PROBLEMS

1. It is a traditional sort of statement among men that they were frequently thrashed during their schooldays and that they "never got a lick amiss." Gather from them and others precise accounts of these cases of punishment and determine as well as possible the effect of the whipping on (*a*) the work, (*b*) conduct, (*c*) permanent attitudes toward school and teacher. Do the facts seem to bear out the statements? How far does the general tendency to look back with pleasure upon all the hardships of boyhood contribute to the opinion referred to?

2. Investigate carefully several recent cases of corporal punishment, particularly studying the effects upon the child's attitude toward the teacher and the school work.

3. What are the rules and regulations in force in your school regarding punishment?

4. Consider any case of misbehavior and punishment which has come to your attention and (*a*) propose better forms of punishment, (*b*) other treatment which you regard as better for this case than punishment.

5. Consider the same treatment as having been inflicted upon several different children, selecting those varying as much as possible in temperament, age, and home surroundings.

6. Study any available cases of corporal punishment from the viewpoint of this chapter in regard to their brutalizing effect or their use as a last resort.

7. For each of the cases of punishment you have recorded above propose some form of "natural punishment" if possible.

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CHAPTER XXV

CONSTRUCTIVE GOVERNMENT

What is *order*? We have heard that "order is heaven's first law," but if *order* means unnatural silence, straight lines, rigid positions, and formality, there is little that is heavenly about the places where it prevails. It is neither heavenly nor natural. The elaborate, laborious silence, the suppression of natural activity, known as "order" in many schoolrooms, defies every precedent and violates every law found in the order of nature. The one criterion of orderliness in school is conduciveness to educative activity. Not the sound of the "pin-drop" but the sound of happy industry is the test of good school order — not tense restraint but intense activity. The noise of children happy and busy is not disorder unless it prevents others from being happy and busy. The methods of orderly government consist not in repressing activity so much as in stimulating it; not in continually stopping something but in "starting something," not in correcting but in directing; not in pupil suppression but in pupil expression.

Transition of government to social control. The governments of society, political and pedagogical alike, have passed from the merely negative level to the positive; from preventing mutual destruction to fostering mutual progress. The assumption of the old régime was that subjects or children had neither the intelligence nor the community of sympathy to govern themselves. The new type of government assumes that they never will, except through the exercise of such intelligence and sympathy as they do have. School

monarchs, like political ones, erred in overestimating their own fitness to rule and in underestimating the social capacity of their subjects for self-rule. We entered the World War to establish the rights of people to rule themselves; because "The world must be made safe for democracy." The safety of democracy involves the development of people in self-rule no less than the overthrow of the self-seeking tyrannies. The latter is a task for armies; the former is one for schools. The wiser teachers become, the less dogmatic and cocksure are they about their own methods and policies and the more respect they have for child initiative and social sympathy. Modern study of children has disclosed undreamed-of resources for wise self-direction and has given a new conception of the pedagogical divine right to rule.

Government must vary with the governed. It is the nature of very young children to accept parental guidance without question. Their capacity for self-direction is consumed in managing their simple muscular coördinations. The problem in governing them is how to mother them wisely. The blunder of the schools has always been inertia. They have sought to keep the children infants when in the course of nature they became otherwise.

European universities, originally voluntary assemblies of adult knowledge-seekers, have clung zealously to their democratic administration. The older American colleges, however, have grown up rather from schools of boys and therefore have had to *adopt* some form of student government to get it. The principle was first ingrafted at the old College of William and Mary as the "honor system" in 1779. During the past century various types of honor systems or plans of student government have extended to American higher institutions. Many of these assume responsibility only for honesty in examinations, others extend their oversight to hazing and thieving and, in some cases, to practically the

whole of the student's life. American high schools have tended to mimic our colleges in many things, and elementary schools too often mimic the high schools. Thus the *toga virilis* of American school government, the honor system, has been *put on* by many schools that would be better fitted with administrative kilts.

Success of the democratic spirit in school. Still this democratic tendency has resulted in better standards of order, even in more rigid standards of silence and restraint, for it has been self-restraint. By enlisting the coöperation instead of the opposition of the child's social impulses, it has been an easier, a more economical means of attaining favorable working conditions. The evils of it are due to installing a form, the benefits to developing a spirit. It is the same old story, the inevitable, recurrent story of politics, of art, of literature, of religion, of thought, — the form without the spirit is void.

School cities. Few schools probably exhibit higher standards of quiet, busy orderliness than some of those in which "school cities" exist. Their standards of conduct are fixed in pupil legislative assemblies, while pupil courts, pupil inspectors, pupil policemen, and pupil truant officers enforce their laws and administer discipline. The teacher retains, in varying degrees, an advisory relation and usually the right of veto, but is often little more than an onlooker, the royal figurehead of a limited monarchy. In these school democracies, also, history has repeated itself with an interesting faithfulness. Some of them have succeeded magnificently and are enthusiastically heralded as the solution of all the ills of government. Some have failed utterly because they were too suddenly "adopted" for an unprepared citizenry. Others have worked well so long as the original founder dominated, showing that however democratic in form they were dictatorships in fact. Still others,

through unwise meddling of the abdicating monarchs, unwilling to let difficulties evolve their own solution, have brought the whole of self-government into contempt as a meaningless mockery. And, true still to historical precedent, critics of these school democracies have been prone to exaggerate their newly developed evils and to forget the greater faults of the old monarchies, — faults to which the critics were so inured as perhaps never to have seen them at all.

No teacher of children can afford to be ignorant of the working and spirit of the elaborate "school cities." Whether or not they may be desirable for general adoption or for any particular community, it cannot be questioned that they show the limitless possibilities of children for self-government. Merely as a dramatization of the fundamental lessons of civics they are a genuinely important contribution to modern education. The aim of this volume, however, demands that we limit our further discussion to a less radical type of school government.

Liberty grows with capacity for it. The public school is ideally situated for developing the capacity for and the forms of self-government *pari passu*. Starting with the physical helplessness and natural docility of the primary child, each privilege and responsibility should be assumed by him just so far as he will use it wisely. He is free to do whatever contributes to his work or comfort provided it does not interfere with the work or comfort of any other. Restrictions should be imposed on no other ground than this and should be as few as possible. One gets his drink or speaks or leaves the room on precisely the same terms that he should elsewhere, — that it interferes with no duty, that it interferes with no one else, that it is done as a lady or gentleman should do it. Children must learn through observation and trial just what it is that does annoy others and just what does interfere with work.

Results of unnecessary restrictions. To require special permission for leaving the room, getting a drink, speaking to a neighbor, passing a book, or other natural and common acts accomplishes several undesirable results. The very restriction gives such things an unnatural desirability and multiplies the frequency of the requests. The frequent requests, whether by snapping of fingers or less objectionable means, cause more distraction of both teacher and class than would result from acting without permission. There is more or less of immodesty, which all are forced to hear and to practice, that is quite opposed to refined training. All training in discretion, all development of self-government in the matters involved is forestalled. How can children be expected to do as ladies and gentlemen should do unless they are given the chance to do as ladies and gentlemen do?

Values of self-direction. Certain restrictions may be found necessary and desirable, such as that no two shall leave their seats at the same time, that none shall remain out more than a specified number of minutes, that there shall be no leaving within so many minutes of a recess. It is far better that children themselves should apply these restrictions than for the teacher to be burdened with them, and experience shows that the children, with a little guidance, will execute reasonable restrictions more effectively than a teacher can. When one is teaching he cannot be thinking of all these details for thirty children at once. When doing the latter he cannot be teaching. Granting permission relieves the child from any responsibility for the wisdom of it. Refusal engenders resentment and a feeling of injustice regardless of reasons.

As already indicated, prescribed rules and regulations tend by psychological suggestion to make the proscribed conduct attractive. A case in point is the classic instance of the new master who promulgated a rule against sliding down the

woodshed roof. This amusement had not before occurred to the boys, but by the next morning it was their favorite occupation. Furthermore, imposed rules prevent any exercise of the pupil's judgment as to the right and wrong of his conduct. However desirable the conduct obtained by enforced regulation, it has a minimum of moral and educative value. Children must have the opportunity to decide for themselves, and the chance to decide wrong, if they are to learn to decide right.

Initiating social rule. But the making of rules and regulations, and the faithful carrying out by pupils of those made, has the highest educative and moral value. So long as their conduct remains unobjectionable, nothing could be more absurd than to have rules restricting it. Whenever there arises a sufficient reason for restriction, the children will appreciate it. Then they should discuss freely and frankly the restraints that should be imposed. Wide experience has shown that they will almost invariably impose more severe restrictions upon themselves than a wise teacher would. If whispering has become objectionable, almost any grade will promptly vote to prohibit whispering utterly under penalty of a whipping or protracted "keeping-in." They are only too impetuous in making such rules. Then the teacher's broader vision is needed to show them what these rules will mean when enforced month after month. At the first, children will impose and submit to their own penalties with enthusiasm, but when the new wears off, the constant watchfulness and encouragement of the teacher is essential to keep up pressure until the conduct they have sought to establish has become habitual.

Self-made restrictions — few but infallible. Only as real need arises should children be encouraged to make rules for their own regulation. But once adopted, with full knowledge and free volition, enforcement should be infallible. To attain

this ideal, rules should be made only after mature thought and discussion, only one or very few at a time, and with ample provision for their systematic enforcement. The teacher should warn pupils against, rather than urge them to, radical action.

Normally, restrictive rules should pertain only to such conduct as is innocent in itself but becomes objectionable owing to school conditions. That conduct which is wrong anywhere must, of course, be prevented, but it should not be suggested by specific regulation in advance. The assumption should be respected that children in a school society are amenable to and expect to obey political and moral laws and the rules of propriety without special legislation.

Restrictions imposed by authority. Certain official regulations, concerned mainly with routine procedure, are necessary to expedite the business of a large school or system. The reason for and value of these may well be made clear to the children who are expected to observe them. There is no good reason why they should not appreciate the significance of such regulations, and many reasons why they should. But the mere fact that the properly constituted authorities have provided them for the benefit of the schools is reason enough for unhesitating obedience. Individuals cannot expect to judge the wisdom of all laws made for their guidance, but by participating in the making of some and understanding fully the value of many others, a child can readily believe that there is a rationality and not a mere arbitrary tyranny in those rules which he does not understand. Thus he grows up in the law-respecting attitude of a good citizen.

Rules for the teacher's protection. Systems of regulations, as of penalties, marks, and promotions, are often adopted for the express purpose of protecting teachers and officials from the necessity of decision or from charges of partiality. The wrathy parent is ever looming on the weak teacher's horizon.

Such organization mechanizes the whole life of the school. Pupil morality becomes literal, pharisaical, and artificial. Teachers hide behind the letter of the law to establish injustice as well as justice. Officials fear to be conscientious, sympathetic educators and become mere impersonal judges of the technical type. Modern juvenile courts are primarily sympathetic, informal, and free from technical and literal restrictions. Why should schools retain the archaic policies which political government has rejected as a failure? Besides, school government by impersonal statute does not secure the support and confidence of parents. The teacher who keeps in touch with parents, advises with them, takes them into his confidence, and then uses his own best judgment rather than hard and fast rules, is the teacher who has the confidence and coöperation of parents.

Enforcement of laws by pupils. As legislation by the children secures laws better adapted to their needs, more easily enforced, and better appreciated, and trains the children in ethical judgment, self-direction, and good citizenship; so execution of these laws by the pupils is more thorough, more just, accomplished with less friction, insures sympathetic coöperation, and trains the child to appreciate the position of public officials and the significance of their work and to coöperate in the responsibility of citizens.

Selection of monitors. Just as it is best to adopt laws only as they become needed, so officials should be selected for their enforcement in the school society only so far as necessary to secure efficient government. Functionless officials bring government into disrepute quite as much as unenforced laws. As each law is passed, monitors may be selected whose special duty is to enforce it. These monitors may well be pupils who themselves are in danger of violating the new law, but they certainly must be those in sympathy with it. If it is desirable for a class to enforce a law which

they need, it is particularly desirable for an individual to have the enforcing of a law which he needs. Obviously, care must be taken to have monitors who are strong enough to enforce the law upon themselves as well as upon others, or to team them in such combinations that efficiency will surely be attained. Short terms in office secure a succession of "new brooms" and renewed assurances of faithfulness. The actual selection of the monitors affords the highest opportunity for the exercise of social judgment by the pupils. Here, particularly, the teacher should be always ready with warning questions and suggestions, yet without intruding so as to rob the children of their sense of responsibility.

Installation. Every appointment should terminate promptly in case of inefficiency or neglect of duty. The duties and responsibilities should be clearly determined and made very plain, with the assistance of the teacher, before monitors are selected. If the duties are likely to be difficult or to require much persistence, in which quality children are notably weak, the induction into office should be made formal and impressive. Frequent conferences of the monitors with each other and with the teacher help to keep up interest and faithfulness.

Need of infallible persistency. It is when the first enthusiasm has passed but the end is not yet fully attained that the teacher's support and persistent watchfulness is most needed. When the children are beginning to forget, the teacher must be sure to remember. And teachers are but little better than the children in this tendency to become slack after the new has worn off. The "Progress Book" should here serve as a valuable reminder. There should be readily accessible a full record of every law that is passed, with the names of monitors whose duty it is to enforce it; a record of all meetings and plans for enforcement. Such record may well be kept by the children, if by their own

initiative, but it must be available where it will prevent the teacher's forgetting. No routine, no drudgery of marking papers, no worries or special cases of discipline must prevent the teacher from seeing to it that *once a rule has been adopted by the children it is never neglected until its purpose has been accomplished or it has been formally repealed.* Laws tacitly ignored make for bad citizenship. In school, where training for citizenship is the prime purpose, laws are quickly made and unmade, and there can be no excuse for dead-letter laws. .

Social control of punctuality and attendance. The problem of promptness and regularity of attendance has been most successfully handled by a simple social device. A banner is awarded monthly to the class making the best record in these respects. In each room two "class captains" are elected by the pupils to keep the records under the supervision of the teacher and to enforce regularity. These captains bring a powerful social pressure to bear directly upon each child who tends to bring down the class standard. They investigate excuses, call upon parents, and plead most successfully for the removal of any home hindrances to perfect attendance. They personally see to it that tardiness is not caused by loitering along the way. They do all with a thoroughness and fairness which the busy teacher cannot approximate. They also take command of the marching in and out of the lines — with the coveted banner at the head of the proud winners.

Good citizenship in school elections. As to the mode of selecting monitors, many methods will be devised by the children, but fitness for the office should be the *sine qua non.* In bestowing a public office there must be no political pull, partiality of the powers that be, or rewarding of a popular favorite. This lesson cannot be learned too early, and it is just as important for efficient government in school as in the state.

Caution. The necessity for thoroughness and infallible persistency emphasizes the necessity for few laws and simple government. The government should *grow* rather than *be installed.* The more elaborate school city may be effective and may be a charming lesson in civics, but stability of government and *development* of self-control warn us to go slow. A genius in organization will occasionally make a complex form of government a thorough success, but a mere imitator is more likely to make it a fad for a short while and after that a joke. Woe unto that school whose government has become a joke to its pupils!

PROBLEMS

1. Observe carefully several classrooms and make a written analysis of the characteristics which seem to make for order in each. Does silence seem to be indispensable to favorable work?

2. Among the self-government schemes in actual operation, which seem to be "top-heavy"? Which seem to be regarded rather as fads than as practical solutions of daily problems? To what extent do any of them fail to command respect?

3. Just what transitions in self-government should be made, grade by grade, from the kindergarten to college?

4. Draw up a set of regulations such as you think some given grade should adopt for itself. Tell how you would go about getting such regulations adopted.

5. Examine any set of official regulations and indicate which of them are apparently intended to protect teachers from criticism and relieve them from the responsibility of making judgments.

6. Write a summary of all the means you can learn of for securing promptness and regularity of attendance. Which of these seems to have the greatest permanent educative value? Why?

READINGS

See next chapter.

CHAPTER XXVI

CORRECTIVE GOVERNMENT

Constructive versus corrective government. In the last chapter our discussion assumed a normal situation, just such a situation as prevails in well-managed schools everywhere and will prevail where bad management does not make it otherwise. In such schools government is constructive and educative, and serious problems of corrective discipline seldom or never arise. But there are schools where bad traditions, bad habits, and false ideals have grown up through mismanagement, and to any school there may come pupils whose conduct is evilly affected by influences beyond the pale of school control. Because of the disorderly pupil and the disorderly school a further discussion of the principles and methods of government is advisable.

Simple deprivation. In those commonplace matters in which the pupil has individual liberty to conduct himself "as ladies and gentlemen do" the logical treatment of one who abuses any privilege is merely to deprive him of that privilege. This is "natural punishment" and educative in the best sense, provided it is not made unnaturally severe or lenient. The pupil should be conscious that the teacher is a sympathetic friend, compelled much to his own regret to impose the restriction for the protection of the school and its standards of conduct. He should know that his teacher is genuinely happy when there can be a renewal of complete trust and restoration of all privileges. After a pupil has been restored to full privileges — especially one of those irrepressible pupils who finds it so hard to walk in the

narrow way — the teacher should actively help him to retain his good standing. Some secret word or sign of warning, the holding up of a finger, always pleasantly and "just between us two," helps to keep up a bond of sympathy and is a practical form of coöperation. Such signs need not be thought too childish. They are very effective among boys and girls, and the great secret orders of men perpetuate them with tremendous solemnity.

A pupil whose abuse of liberty has necessitated that he get special permission to speak to another, to get a drink, to leave the room, etc. should not be allowed to disturb the class in getting that permission. He should not be allowed to ask permission except when the teacher is not engaged in a recitation or as may be otherwise most convenient. He should know in advance that permission will be granted only rarely and when clearly necessary. He may be required to write his requests and submit them silently. The deprivation should be very real and not hastily removed, but the spirit of the teacher toward him should be sympathetic and helpful always.

Innocent wrongdoing. Aside from the abuse of liberties there is conduct which is bad in itself, which would be bad anywhere. If this is done innocently the remedy, of course, is helpful instruction and sympathetic guidance. "Ignorance of the law" is the best possible excuse for the pupil, whatever it may be for the criminal. But the pupil's ignorance is the teacher's responsibility and is quickly remedied. It must not be pleaded a second time for the same offense.

School justice never blind. Conscious violation of the law is an entirely different matter. But here, again, the teacher must rise above the ideals of the criminal court and consider motives rather than the overt act or technical law. Justice to children is never blind. Blindness to their impelling motives is never just. There must be no haggling over

legal technicalities, quibbling as to the precise connotation of a written statute. First of all, let the child feel that the teacher is his friend and advocate rather than his judge. The penalty imposed is only to help him remember and to keep him out of such trouble another time, to help him to learn an important lesson before his ignorance becomes more serious, and to protect the school from his misdoings until he can learn to do as others do. The vital step is to arouse right motives, to make the child anxious to do right, desirous to be helped to self-control. If Ben Lindsey and other judges of juvenile courts can deal thus with the toughest outcasts of the slums on the short aquaintance of the courtroom, surely no teacher in close touch with the normal children of the school will dare to say "Impossible"! There is no normal child in our schools so hard and abandoned that a truly sympathetic teacher cannot reach his heart and his motives and deal with them directly.

Manipulating motives and diagnosing conduct. In dealing with the errant motives involved in misconduct two objects are in view: first, to prevent the motive from finding any satisfaction in the misconduct; and second, to redirect it into right conduct in which it will find satisfaction. For example, if a boy disturbs a room in order to show off before the class, the punishment must bring him their contempt or derision and must not permit him to pose as a hero or martyr. What one does "just to annoy the teacher" must never succeed in its purpose. He who tries too hard to appear "smart" must be made to appear foolish. The combative youth must have no chance to get into a physical conflict with the teacher, unless it be of the sort that will effectually convert his pugnacity into respectful admiration. The cheat must submit to frequent additional and more searching tests. The liar must lie in vain and thenceforth prove his statements to have them accepted. The thief must

pay high for his ill-gotten gains, and his access to the property of others must be well guarded thereafter.

Dishonesty a symptom, not a motive. Dishonesty is not a motive, it is a symptom of motives lacking natural means of exercise. Cheating, lying, and stealing are the results of stimulating perfectly good and normal impulses beyond the means of satisfying them. One cheats in examination because of the very impulses of rivalry, desire for approval and for promotion, which the examining and promoting schemes were intended to stimulate. Either less stimulation or better preparation would remove the temptation to cheat. One lies to avoid impending punishment, to obtain some undeserved reward or other advantage, or for the sake of the admiration elicited by his yarns. If penalties and rewards were never unjustly given or promised, if abundant opportunities were afforded for the harmless play of the imagination, for the love of expression, and for the dramatic instinct school lies would be rare indeed. One steals for the same reason that the starving waif takes the loaf of bread, or the speculator waters railroad stock, — because his genuine needs or his degenerate desires are greater than his actual resources. If just needs are provided for and right thinking corrects abnormal desires, why should there be stealing? Behind the dishonesty we must find the too heavy pressure and relieve it. We must locate the too feeble resources and strengthen them. Meanwhile the dishonest act must be made to prove futile.

Fighting. Fighting may be an expression of cowardly bullying; it may be a desperate self-defense; it may be chivalrous protection of the weak; it may be mere weak imitation under the intentional suggestion of older boys, a sort of mob spirit wickedly unloosed by others. Manifestly the treatment of these different cases must be totally different, and that, too, regardless of who was the actual physical

aggressor. Sometimes the fight itself disposes of the punishment and of the victory where they are most needed and in proper proportions. Often the results are wholly unjust, for might is not right. One may deserve commendation, another humiliation, but it is extremely doubtful if combativeness is ever remedied by further physical combat with the teacher, or bullying remedied by the teacher's whipping a fellow smaller than himself.

Profanity. Foul language and profanity in boys, and probably all manner of sheer vileness, are due to misguided virility. Boys want to appear manly, big, dominant, and virile. Their highest ambition is to realize essential manliness. On the street corner they see the strong, vital ones, the doers, the heroic, daring fellows who have seen the world and conquered it — according to their own testimony. In the pulpit and schoolroom they see the effeminate, proper, prosaic, humdrum individuals who never committed an impropriety — judging by their righteous pose. A boy whose limited experience prevents his seeing below the surface of things, whose impulses incline to the concrete heroism of a bandit rather than to the sublimated courage of a Lincoln or a Lee, who sees action rather than abstraction, may be expected to admire the braggart of the corner saloon who has trod all the paths that are dark and devious rather than the prosy professor who is shocked by a vigorous expletive.

Vice versus virility. The remedy for these worst of school evils is not direct punishment for the offense — especially as a very small proportion of such offenses are ever known to the teacher — but is in letting the boys see still more of life. Show them that the braggarts are not the men who do and dare, but are the shallowest of imitations. Show them that the vileness of these loafers is not a quality which makes for any poor trifle of manliness they may

possess. The vices are what they have in common with the most despised and degraded of men, — the failures, the helpless, the whining, cringing "down-and-outs." Show up the braggarts, not as "awful," "dreadful," and "naughty," but as contemptible, despicable, and foolish. Fill the boys with genuine stories of the heroes worth while, of men who really do and dare. Show the clean, vigorous manliness of explorers, soldiers, great athletes, and masters of men. Do not exaggerate the minor vices beyond the facts of daily observation. Show that some men may be strong, capable leaders of men *in spite* of these vices, never *because* of them. Get boys to seek the genuine elements of strength, of manliness, of virility. Do not be too hasty to satisfy their search by wise platitudes and moralizing. *Keep them hunting for manliness.*

More than all, we need manly men for teachers. Strong, vigorous, athletic men — men to whom the men of the community look up; men of whom the loafers and braggarts are afraid; men with fists, if you please, but especially men with backbones and men with hearts pumping clean, red blood. Happily we are getting this new type of men for our teaching and social work, for scout masters and Y.M.C.A. leaders, and we are getting vigorous, virile, active "stunts" for boys to do. And these are the real remedies, the only remedies, for foulness and vileness.

As to the girls. We have spoken of boys and of men teachers because their problem is the more serious — and because we know more about it. It is similarly true that the worst conduct of girls is due to womanliness misdirected, and the remedy is a clearer appreciation of the hideous shallowness of some women and the genuine, wonderful womanliness of others. Girls should know how false it is that beauty is only skin-deep and how infinitely lovely is the beauty of genuineness, wholesomeness, and earnest,

useful womanliness. It is perhaps because there is so much more of splendid womanliness than of manliness in our American teaching corps that the "boy problem" is so much more serious than the girl problem. While a woman cannot be expected to exemplify virility for the boys, she can teach it if she is the right sort of woman. If a boy's teachers must be effeminate, women are to be preferred.

Authority and rebellion. There are teachers who, borrowing their ideals of authority from the military, regard *rebellion* as the unpardonable sin of the school child. As though driving slaves or mutinous sailors, outnumbered forty to one, they say defiance of authority must be suppressed with an iron hand. "The very existence of government is imperiled if rebellion be not promptly nipped in the bud." "The authority of the teacher must be preserved at any cost." They seem to regard their own "authority" as a sort of windbag which, once punctured, must inevitably collapse. Perhaps this is true! Their sort of government is tyranny and fit only for slaves; it develops subjects for servility or for revolution.

Democratic school government assumes that it is of the pupils, by the pupils, and for the pupils. The authority of the school is no more identified with the teacher than with the pupils. That government derives its just powers from the interests, if not indeed from the consent, of the governed is accepted by teachers and pupils alike. Rebellious outbreaks are quite normal and will frequently recur. But these are simply the natural eruptions of childhood and adolescence. The child is rebelling as much against himself as against the school. So far from making deep-laid plots to overthrow authority, he is as much surprised by his own outbreaks as is the teacher. The child does not know the symptoms or the significance of them. The teacher ought to know both, and should be prepared to

await quietly the end of the eruption and then sympathetically help the child to readjust himself. Especially important at such times is it to avoid useless show of authority and irritating, dictatorial ways. It is the nature of the adolescent — and is it not of us all? — to resent the domineering tone more than the substance of actual control. Furthermore, nothing could be more absolutely useless and foolish in government than the domineering, "bossy" tone; than a scolding voice; than nagging, recriminating, faultfinding, threatening. Few things will more certainly undermine dignity and authority

Commands versus obedience. *Commands should be taboo in school.* Directions should be given in a friendly, coöperative tone as one would talk to a partner, assuming that the instructions are welcome. "Will you" and "thank you" are keys to authority as well as to culture. These are the sort of commands that freeborn citizens should be taught to obey. Voluntary acquiescence in the requests of those whose business it is to direct is far better obedience than servile submission to a harsh imperative backed by a fear of consequences. It is the type of obedience in which the citizens of a democracy should be trained. It makes for better citizenship, better loyalty and service to the government, more law-abiding and useful manhood. It leaves no tendency to "cut loose" when the back of the policeman or teacher is turned.

The authority of fairness and courtesy. But *suaviter in modo* implies *fortiter in re.* Give directions politely. If there is reason for changing, be not slow or niggardly in accepting suggestions. Leave yourself plenty of opportunity for correcting your frequent errors and immature judgments. There is no reason for making the children think you infallible nor the slightest possibility of doing so. Confidence is established not by being stubborn but by being

right. Such a habit of reasonableness makes it easy on occasion to say, "Just take my word for it this time," or to ask for immediate obedience without discussion. When a tendency to quibble shows itself, or an oversmart insistence on explanations, or if explanation is asked as a condition of obedience, it is best to insist quietly that "we will do this first and talk about it afterward." The very first resistance to the velvet of courtesy should bring a gentle pressure of the steel of authority. *Make it easy to obey but make it inevitable.* Do not hurry the child when he is in an irresponsible tantrum, but let him cool down to a realization of the unavoidable. Before directions take the form of command, be absolutely sure that you have the authority, the right, the support of higher officials, and that it is worth while — then never give up. But this means that commands must be given only after cool deliberation, only when there can be no question of their justice.

Threatening versus doing. Threats, like peremptory commands, have no place in the school. It is fair to warn a child that "this must not be done," but it is important to leave the consequence of doing it as an indefinite possibility, making sure that if punishment is imposed the connection with the offense is made perfectly clear. The hasty "I'll whip you if you do that again" is about as subversive of permanent good discipline as anything that could be devised. Usually such a statement is a falsehood, and children are not slow to realize this. Authority is indeed at a low ebb when children do not even believe the teacher. Word once given that a certain consequence *will* follow upon certain conduct, it *must* follow as surely as things human can be made sure. This means that threats must not be made in anger or in haste but only after due thought and full calculation of all immediate and ultimate consequences, practical, pedagogical, and legal. When all this has been thought

out it will doubtless be found that the threat is not worth the making. The carefully considered threat is not made.

Real teacher-courage. A despairing teacher may protest, "When one is at his wits' end with a hundred distractions and annoyances, how can he help threatening?" To this we can only reply that whether he can help threatening or not, the threatening will not help him. "But if we have threatened inadvisedly, promised unwisely, or commanded unjustly, shall we pursue the mistake to the bitter end and perhaps become involved in litigation with loss of position and professional standing?" No! sticking to a wrong will not make it right. There is just one way to remedy the unjust command or threat; that is, *take it back.* The quicker, squarer, and franker the retraction, the better for one's authority. As said above, no one believes you are infallible, so why keep up the bluff? Admit your mistake, apologize for an injustice, — as a lady or gentleman should, — and the children's respect for you will grow just as yours does for the same sort of nobility in one of them. Of course it is hard to acknowledge a wrong, — especially for a teacher, — but it is just as incumbent on teachers as on other mortals. Then, again, it serves to make one more careful next time.

Conclusion. Discipline is required only in cases of emergency. The basis of discipline is the diagnosis of motives. For this, one needs a knowledge of children, a cool head, and a sympathetic heart. And in one's diagnosis he must never lose sight of the fundamental fact that the impulses which impel boys are boy impulses. Boy conduct cannot be successfully analyzed into the impulses of a prim and precise maiden lady nor those of a bespectacled bookworm. We must read a boy's conduct through *his* eyes, not through our own. This seemingly impossible thing is entirely easy if only we utilize the social control of the

class. Offenses must be regarded as committed not against the teacher but against the class. Standards of order are to be established and to be enforced by the class rather than by the teacher. The class is the better judge of motives and can more efficiently restrain its individuals.

After all, the only real remedy for bad order is good teaching. If we are unwilling for Satan to find work for idle hands, we must find it first. Occupation the hands will have. Teaching is not merely assigning tasks but making them vital and genuine. When this is done there is no idleness, no laziness, no mischief. This whole problem of discipline is entirely beside the question for hundreds of teachers. It is something with which they have little or no concern. They are real teachers.

PROBLEMS

1. Analyze the impelling motives of as many cases as possible of bad conduct of children, in school and out. (The *habit* of doing this is invaluable for a teacher.)

2. When you have decided upon the probable motive in any such case, determine the treatment which you think would most effectively meet the needs of the particular case.

3. Find, by inquiry and observation and by recalling instances during your school life, cases in which dealing with school disorders by law or regulation complicated instead of relieved the difficulty.

4. Can you find instances in which the punishment strengthened instead of defeated the impulse which caused the misbehavior?

5. Investigate a number of different cases of school fighting. Point out the differences in cause among them and different treatment appropriate for those involved. Can you give instances in which different treatment of different individuals under the same circumstances would be justifiable?

6. Similarly, point out distinctions in other forms of misconduct — profanity, falsehood, stealing, cheating, etc. — in which

overt acts were similar but underlying causes were quite different. What differences in discipline would be appropriate?

7. Considering as many instances as you can of "rebellion against the teacher's authority," which were premeditated plans to undermine authority and which were mere uncontrollable outbreaks of temper provoked by some harshness or supposed injustice?

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CHAPTER XXVII

COMMUNITY COÖPERATION

School as the center of education. Not all of a child's education is in school — not even the major part. Every experience of life, in just the proportion that it is vital, just so far as it can affect subsequent conduct, is a factor in education. Home, church, street, fields, and woods; work, play, reading, amusements, and conversations, — all are as truly educative as school and study. But these others are educative only incidentally, while the school has no other reason for its existence. The school supplements, organizes, and unifies these others. Education "begins at the cradle and ends at the grave," but it is school that affords the scheme of organization for it all. School provides the plan and policies of life and that core of interests by which it is determined from hour to hour which educative influences shall be selected and assimilated from the limitless universe of one's experiences. School life interprets all life. Our school subjects are no *Dinge an sich*; they have no reality in themselves. They are but our means of apprehending our out-of-school experiences. Giving the child school subjects without relating them to life is not unlike supplying him with elaborate machines without knowledge or opportunity for their use; tools without skill, plans, or materials.

The foundation of society. Education is society's means of self-preservation. It is the means by which the social whole secures a constantly renewed supply of members who will seek its welfare through their own — not their own at society's expense. It is the development of moral and

efficient members of society for which the schools exist, — those who are both "good and good for something." Tradition has worn the paths of academic progress into such deep ruts that many who travel therein are wholly unable to see the goal to which they are traveling or the direction of the course they are following. Teachers are often content to follow blindly the paths that have been trodden, heedless of whither they lead. But the goal, whether or not our paths shall lead there, is this useful and helpful member of society, and it is the real business of the school to focus upon this aim all of its own forces and, as far as possible, those of the world outside of itself.

The unifier of modern life. Modern industrial organization of society has brought about a very highly specialized and complex order of affairs. Every individual's existence is becoming more dependent on world-wide interrelations and commercial coöperation. The work of the individual finds its value only in the conjunction of countless streams of diverse interests. Yet these very conditions of dependence result in the laborers knowing less and less of their own and of each other's part in the whole process. Commercial progress makes for infinitely greater interdependence with incomparably less community of sympathy. Living becomes vicarious in form but selfish in spirit. To meet this new condition the modern school has a new and much broader responsibility than the schools of the simple society of former generations. Its supreme task is no longer merely academic training; it is to unify the educative influences outside of itself, to reintegrate the interests and sympathies which social and industrial tendencies are disintegrating, to bridge gaps and weld together fragmentary bits of experience afforded by out-of-school life, to make out of the mystifying complexity of life as seen from the angle of any individual outlook a rational, beneficent whole.

It is to show that the small contribution of every individual is worthy and supremely important when intelligibly related to the purpose and plan of the whole.

Community correlations. This unifying function of the school is being accomplished by vitally interrelating the work of the school with the life about it. Every school subject finds its motivation and its materials in the immediate environment. Classes in school read and write and calculate and they talk and think about the things which mean most to them out of school. The best books in geography, in history, in science, in ethics, in civics, in industry, are nature and the neighborhood life. Here also are the best laboratories, the motivating problems, the limitless source of materials and, in fact, the final justification for including most subjects in the curriculum.

"The social trend" is the dominant note in current educational thought and achievement. Correlation of school work with community life is the burden of recent writings and discussions. No longer is the school a thing apart; it is the heart of the community life. It contributes to every institution and aspect of the life of the people, and all these make their contributions to it.

It is not permissible here to go into the matter of the correlation of studies with community activities. But the problems of organization and government also find their most effective means and their ultimate justification in their adjustment to community life. Some of the profitable reciprocal relations which may readily be established in almost any community are suggested.

The press. The press, itself a distinctively educative force, offers special advantages for coöperation. Items of school news bring the claims of public education to the front and tend to develop school pride in both pupils and people. Policies and needs of the school can thus be

brought constantly to the public attention. An "honor roll" in public print affords a powerful incentive to individual effort and group loyalty. The roll may be based on promptness, regularity, scholarship, deportment, or any combination of these which will accomplish the effect sought at the time. It may be large, including all who do well, or it may be small enough to be a decided distinction. Like all incentives, its use should be discriminating and varied — not routine.

Occasional publication of children's letters, compositions, and drawings is a wholesome and effective stimulus. These should not be primarily for "showing off" but should be something of *real value to the readers*. They may be an indication of the character of the work of the school, or actual information of interest to the reading public. All children above the primary grades are occasionally learning facts which would be of interest to many of their elders if well expressed. This applies particularly to the facts of the home community and its life. The geography, geology, birds, plants, soils, occupations, history, and traditions of the neighborhood are always new to some of the community. Such local studies will bring to the front many questions on which data is lacking. Let the local paper be the medium for gathering ideas from the community as well as for disseminating them. The papers are more than repaid for publishing anything readable by the mere fact that it is read. It pays the school as well as other advertisers to keep itself in the public eye.

News columns afford materials for the study of current events. The fact that there is much in them that is merely sensational is an additional reason why the children should early be trained to winnow the wheat from the chaff. These are the papers they will read and do read. Why not teach them to read wisely? Why train them so laboriously to

read Addison's *Spectator* and what was news in the time of Cicero, while leaving them helpless to read discriminatingly the evening paper and what happened to-day throughout the world? The editorial columns discuss the live problems of the day and the community. Whence could children better draw themes for debate and studies of living issues? Daily market quotations afford an inexhaustible supply of vitalizing problems in the arithmetic of stocks, brokerage, and commission. Advertising columns show the trend of progress and standards of living, show where information regarding industries may be accessible, suggest many lines of study and afford materials therefor.

"The movies." *Moving pictures* afford an agency unequaled for teaching through the eye. In many quarters they are being deplored as an agency unequaled for corrupting morals and interfering with home study. Quite logically, therefore, progressive schools are now being equipped with instruments of their own, and producers are preparing reels which will be invaluable in the teaching of school subjects. Where machines are not available these reels may be secured for exhibition at the regular show houses under conditions of advantage to both showman and schoolman.

Other public entertainments. Lyceum courses, lectures, and concerts of every desirable kind have long been regarded as natural co-laborers with the school, and the indorsement and support of educators is commonly sought by them. This is right. All such agencies should be welcomed by the school authorities as reënforcements, and class work may well be readjusted to secure an effective correlation. A few hours devoted to preparing for and following up a good lecture or concert should produce far greater educative dividends than the same time spent on the routine of study. A course of study which is not adaptable to such variations is in danger of ossification.

School and public service; reciprocal benefits. Government, in every aspect with which the child is likely to come into contact, is a peculiarly important part of the community environment with which to relate the activities of the school. It is becoming quite the usual custom in many cities for classes to visit the various departments of city government, studying them in every relation they bear to the people. This has brought the children to feel an interest and partnership in the work of these departments, to become useful coöperators, and to get a sympathetic insight which is sure to make them better citizens later on. The effect on the departments themselves has been decidedly wholesome. One city reports that the water-works plant has never been so carefully kept as since it has become the custom of the school children to visit it. Everywhere the police force has benefited by a friendly, coöperative attitude of the boys as much as the boys have benefited by their loss of fear and gain in understanding of the "cop." Needless restrictions on the boys have been removed, places for them to play have been found and they have been protected in that play, while they themselves have reciprocated by avoiding play that interferes with the rights or pleasures of others. There has been a marked decrease in the destruction of public or exposed property. The boys have become its defenders. Streets and parks are more easily kept in order, though used more than ever by the children. It is no longer necessary to start a blaze in order to see the fire engine, as has often been true in the past. The boy who has been courteously shown over the whole fire department and had its operation explained will prove a valuable ally in discovering or preventing fires and is proud to do the right thing at the right time.

Systematic instruction by public officials. Quite commonly some competent person from the fire, police, water,

street, or other city department will give a series of talks to the school children, explaining in more or less detail the working of the department and showing how its efficiency may be increased by the coöperation of the people. The children, and through them their parents, thus have the opportunity to become more useful citizens and to work intelligently in raising the standards of their public service. Such relations inevitably make the departmental officials more conscious of their own deficiencies and more conscientious in their service.

The courts. In a similar way a first-hand study of the courts brings the child into an appreciative understanding of government on the restrictive side. Viewing its workings from the side of the government, one comes to have a respect for the law without the fear or antagonism so characteristic of the boy on the street. While the child should not see the more sordid cases, he may well have a chance to see the perils of the sort of offenses that he is likely to fall into and to understand the conditions which are likely to lead to such offenses. A judge will often welcome the opportunity to impart to future citizens through occasional talks those lessons which his experience shows they most need as safeguards to their prospective citizenship. The weight which such instruction would carry with it is obvious.

Legislative bodies. There could hardly be a more effective training in good citizenship than to have pupils or representative committees from the high school attend the meetings of the city council or board of county commissioners. The live problems of public affairs may thus become the problems for school study and debate. Parents are naturally consulted for materials and opinions and thus derive a renewed interest in these questions. It needs no argument to prove that a lack of knowledge and consequent lack of interest in public matters is the prime cause of official corruption. If such

meetings are not fit places for schoolboys and schoolgirls to be, it is certainly time that citizens, young and old, should take steps to see that they are made fit. As for understanding public affairs, it should be remembered that they go primarily to learn.

Commercial bodies and welfare organizations. In progressive communities there are various unofficial bodies organized for the public welfare, such as chambers of commerce, business associations, and various welfare leagues. These usually consist of the best people of the community engaged in seeking its best interests. Their purpose can be tremendously aided by seeking the interest and coöperation of the school children, and the school can find no more effective agency for teaching the highest lessons of civics. In Winston-Salem, North Carolina, and some other cities the Chamber of Commerce has admitted the high-school boys to an affiliated membership and organized them into a Junior Chamber devoted to a study of the same questions and fostering of the same ideals and purposes. The civic leagues, improvement associations, and women's clubs, which have been such potent agencies for community betterment all over the country, have found the coöperation of auxiliary or junior leagues to be an effective means of accomplishing many of their purposes.

Efficiency of children in public work. This wise organization and stimulation of school children has frequently been followed by truly surprising results in the way of beautifying or cleaning up a town. Their sharp eyes and busy hands can accomplish wonders when directed by wholesome enthusiasm. Many trying forms of disorder and mischief with which the constituted authorities are powerless to cope can readily be controlled through the ubiquitous small boy. He may at least be trusted not to engage in that which he is appointed to suppress.

In Indianapolis pupil participation in the government of the school leads naturally into pupil participation in the larger civic life of the community of which the school itself is a part. Maintaining order on the playground naturally extends to maintaining order on the streets in the vicinity of the school. It is common for committees of older boys to look after the safety of younger children in crossing streets near the school. Solicitude for the cleanliness and beauty of school grounds develops equal solicitude for the cleanliness and beauty of adjoining streets, alleys, and vacant lots. School gardening quickly stimulates home gardening, and whole neighborhoods have been transformed through the influence of the schools. — Letter of United States Bureau of Education

Boy Scouts. The Boy Scout movement, which has swept the world, is an untold power for educative progress. It should have, and doubtless has, the unqualified support and coöperation of school authorities everywhere. The Scout spirit of manliness could with great profit be carried over into much of the work of the school. Wherever modification of schedule, course of study, or other accommodation can bring about a more effective coöperation with the Scout organization, the schools will doubtless be the gainers as well as the Scouts.

School savings bank. The school savings bank affords an unequaled practical agency for training in thrift. By coöperation with a progressive bank, deposit books are provided. At stated times the teachers or other designated persons receive deposits of one cent or more and transfer them in a lump to the bank. The plan is so easily operated and so readily responded to, especially by the poorer pupils, that it should be in use everywhere, city and country.

The school savings bank of Public School No. 77 of Borough of Queens, New York City, has had $4300 deposited in it in the three years of its existence. More than half of this amount is still on deposit either with the school bank or with a State Savings Bank. — Letter of United States Bureau of Education

Industries of the community. Every industry of the community likewise has its values in assisting the school activities, both by the materials it affords for concrete, vitalized instruction and in its lessons of organization and reciprocal service to the community and to the industrial world. The enlightened management of such concerns usually feels more than repaid for any part it may take in making its operations clear to children, by the mere fact of having the public attention called to them. "Visitors Welcome" has been found to be much better advertising than "Keep Out," and as a foundation for a large permanent prosperity children are a most desirable class of consumers to keep in touch with. A favorable impression on future consumers is regarded as a good investment. And for the school, few forms of instruction are as effective and economical as these industrial studies.

In one city a locomotive works equipped a small machine shop for a high school and guaranteed to give employment to every boy graduating from the high school who desired it. The investment was doubtless a good one. A large dominant industry can well afford the materials and equipment to make the local school a training school for its future employees, and to contribute freely to turning the thoughts of the community favorably towards its activities and purposes.

Educative materials as advertising. Many progressive manufacturing concerns have found it a desirable form of advertising to supply schools in general with instructive exhibits of pictures, models, specimens, and samples, showing each step in the process by which the raw materials are converted into the finished product. One large concern supplies at a nominal cost a series of lectures, illustrated with stereopticon views and moving pictures — practically without advertising — showing the historical development of the

industry in which it is engaged from primitive times to the present. Others furnish views and facts from which any person can readily develop a lecture. Another maintains a "service bureau" at considerable cost to coöperate with schools in affording any facts, information, references, or advice looking toward vitalizing instruction in the agricultural industry in which it is interested.

Railroad coöperation. Railroads have usually proved valuable and willing aids in educational work, and their information bureaus afford splendid illustrative and instructive materials regarding any country or industry tributary to their respective lines. Their activity in coöperation with the state departments of agriculture or the state agricultural colleges and with the health departments, maintaining experimental farms and furnishing lecture and exhibit trains, shows the progress of enlightened selfishness and liberal coöperation of these great corporations with the agencies for public welfare.

Instruction by housekeepers. The superintendent of a western town was without funds or equipment for introducing domestic science. He enlisted the aid of the best housekeepers in town. At appointed times the class of girls visited the homes of these ladies in turn. Each taught the girls in her own way the thing which she could do best. One taught how to make bread; another, salad; another, cake; another, butter. One taught how to clean a room; another, how to set the table and how to serve, etc. The girls rendered real service where possible and brought materials for the cooking. Thus everyone was benefited. The girls not only had the direct instruction but incidentally gathered many ideas of home-making. The highest housekeeping standards of the community were made known in most of the homes, and the coöperating ladies became profoundly interested in the work and success of the school.

Instruction by tradesmen. The coöperation of carpenters, blacksmiths, gardeners, and masters in other trades may be secured at school or at their own shops to instruct the children in those practical things which everyone ought to know. The school may well reciprocate by helping to honor and dignify craftsmanship everywhere and by encouraging the children to render assistance of real value where possible.

School-home gardens. In any rural community or any urban community where there are vacant lots and back yards uncultivated, lessons from farmers and gardeners should have a peculiarly immediate and practical, as well as educative, value. Reports of the United States Commissioner of Education indicate that these home gardens under school direction and guidance are coming to have a considerable economic importance to the families of the children engaged in cultivating them, while their values in improving the conditions of the yards and vacant lots, in keeping children from idling on the streets, and in inspiring ideals of thrift and self-respect are too obvious to need discussion. A paid and trained instructor is necessary to conduct this work on a large scale, but the small beginnings can be profitably conducted by any earnest teacher or public-spirited person with the advisory assistance of some gardener. In 1916 the total values of the products of these school-home gardens amounted to many thousands of dollars, and the movement is hopefully expected to play no small part in relieving the strain of world-wide food shortage. A number of school children have each produced more than one hundred dollars' worth of foodstuffs in this way. Both directly and indirectly it is a movement of national economic significance. The Bureau of Education publishes a series of very practical School-Home Garden Circulars which will be sent to any interested persons.

Medical counsel. A physician of high ideals may be of incalculable value to the school. He can talk on moral and

hygienic problems with an authority and effectiveness beyond the power of the teacher. Most of these professional men are willing and well fitted to contribute to the general welfare in this way. Their talks on personal hygiene clinch and drive home with a tremendous force the lessons taught from the texts. Medical and dental inspection, as discussed in another chapter, also afford opportunities for the professional men of the smaller communities to coöperate with reciprocal benefits.

School credits for home work. An interesting form of coöperation with the homes was devised by Mr. A. I. O'Reilly of Polk County, Oregon, and has been extended with variations to many parts of the country. This is a plan of giving school credits for home work of various kinds, as indicated by the following schedule of credits:[1]

Building fire in the morning, 5 minutes; milking a cow, 5 minutes; cleaning out the barn, 10 minutes; splitting and carrying in wood (12 hours' supply), 10 minutes; turning cream separator, 10 minutes; cleaning horse (each horse), 10 minutes; gathering eggs, 10 minutes; feeding chickens, 5 minutes; feeding pigs, 5 minutes; feeding horse, 5 minutes; feeding cows, 5 minutes; churning butter, 10 minutes; making butter, 10 minutes; blacking stove, 5 minutes; making and baking bread, 1 hour; making biscuits, 10 minutes; preparing the breakfast for family, 30 minutes; preparing supper for family, 30 minutes; washing and wiping dishes (one meal), 15 minutes; sweeping floor, 5 minutes; dusting furniture (rugs, etc., one room), 5 minutes; scrubbing floor, 20 minutes; making beds (must be made after school), each bed 5 minutes; washing, ironing, and starching own clothes that are worn at school (each week), 2 hours; bathing (each bath), 30 minutes; arriving at school with clean hands, face, teeth, and nails, and with hair combed, 10 minutes; practicing music lesson (for 30 minutes), 10 minutes; retiring on or before 9 o'clock, 5 minutes; bathing and dressing baby, 10 minutes; sleeping with window boards in bedroom (each night), 5 minutes; other work

[1] Alderman, School Industrial Credit and Home Industrial Work.

not listed, reasonable credit. The conditions and rules of the home-credit contest are given here:

1. No pupil is obliged to enter the contest.

2. Any pupil entering is free to quit at any time, but if anyone quits without good cause, all credits he or she may have earned will be forfeited.

3. Parent or guardian must send an itemized list (with signature affixed) to the teacher each morning. This list must contain the record of the work each child has done daily.

4. Each day teacher will issue a credit voucher to the pupil. This voucher will state the total number of minutes due the pupil each day for home work.

5. At the close of the contest pupils will return vouchers to teacher, the six pupils who have earned the greatest amount of time, per the vouchers, receiving awards.

6. Contest closes when term of school closes.

7. Once each month the names of the six pupils who are in the lead will be published in the county papers.

8. Ten per cent credit will be added to final examination results of all pupils (except eighth graders) who enter and continue in the contest.

9. When pupil has credits to the amount of one day earned, by surrender of the credits and proper application to teacher he may be granted a holiday, provided not more than one holiday may be granted to a pupil each month.

10. Forfeitures — Dropping out of contest without cause, all credits due; unexcused absence, all credits due; unexcused tardiness, 25 per cent off all credits due; less than 90 per cent in deportment for one month, 10 per cent off all credits due.

11. Awards — Three having highest credits, $3 each; three having second highest, $2 each. Awards to be placed in a savings bank to the credit of the pupil winning it. Funds for awards furnished by the school-district board out of general fund.

Values of credit scheme. Without approving all details of the plan as thus outlined, we may give some of the advantages possible from such a credit system of coöperation between home and school:

1. It trains in habits of health and industry without the driving by parents so often necessary.

2. It meets a sore need in homes where parents themselves are ignorant, shiftless, or too indulgent.

3. It forms an adequate concrete starting point for applied instruction in hygiene, sanitation, and home ideals, which otherwise may be difficult to apply without offense.

4. It may be made an effective center of correlation for vital instruction in English, applied arithmetic, and reading.

5. It develops a respect for the homely virtues and wholesome living, for the routine duties of father and mother.

6. It successfully links the interests of home and school, giving the parents a part in school life and thus increasing their interest in it.

Other plans. In St. Louis a different plan of crediting for home duties has been used with apparent success. There is a monthly record containing blanks for grades on various forms of characteristic home work as well as for the regular school grades. The parent fills in the grade for home work on the basis of the excellence and faithfulness of its performance during the month, and the teacher accepts this grade as equivalent to one required subject of the school course.

In Massachusetts some "home project" is required as a part of all courses in agriculture given in the state-aided schools. This "project" is some considerable and valuable piece of work conducted faithfully under the approved methods presented in the course. It may be the cultivation of a patch of corn or potatoes, the raising of a pen of poultry or pigs or the care of a cow for a season with scientific feeding and milking and full records showing values, tests, etc.

Instruction by "home projects." The homes, farms, and shops of any community may constitute an equipment for industrial teaching in many respects superior to any that

can be provided at school. Lessons in domestic arts and sciences are most effective and least subject to the charge of being impracticable fads when they consist in the actual work of the homes guided and improved by class instruction and credited on the basis of actual home-keeping efficiency. The individual garden plot which each boy cultivates in his own back yard or a neighboring vacant lot constitutes the ideal laboratory for observation and practice of the members of a class in agriculture. The value of the lessons is greatly enhanced by the fact that the pupil receives the reward of his study and care in the form of profits and products instead of artificial and meaningless marks. Manual-training lessons may be conducted in the form of useful work done at home. Instead of a series of set and possibly useless exercises taking many hours of sadly needed schooltime, the boys may find their problems in the actual needs of the home. One desires to make a new gate or prevent the old one from sagging, another wants to put a shelf in the pantry for mother, another to make a set of steps or a flower stand. Detailed instructions, plans, and specifications can be worked out by and for the whole class. Those interested in one particular problem will work it out, reporting progress regularly to the class. Others will be simultaneously working up other projects in which they are interested. This home correlation is a boon to small and poorly equipped schools, and those without adequate teaching force, in the utilizing of home equipment and home time.

Utilizing neighborhood knowledge. A further advantage of this correlated home work is that instead of the getting of outside help or advice being considered a dishonorable thing, as is usually true in academic work, it is regarded as good, sound sense. Every encouragement is given to find the best means of doing the task in hand by seeking information from every available source. What one does n't

know he finds out in the most economical way possible. Parents, neighbors, locally famous cooks, master tradesmen, and *all who know* are freely called upon for all they are willing to impart. They may come to the school, or the pupils may go to them.

Supervision and exhibition of home work. This correlated home work should be fully reported and carefully recorded for credit as school work. Teachers and pupils should occasionally make tours of inspection and instruction to the homes where such work is being done. The products should occasionally be massed as far as possible in exhibits. A "patrons' day" celebration or a special "home-work day" affords the right opportunity. Along with the specimens of cake, bread, butter, jellies, fruits, etc. of the cooking classes and the sewing and fancy work of the domestic-arts pupils are shown basketry, mats, and carpentry work; poultry, pigs, and garden products; farm and stock records. Photographs of back-yard improvements — taken before and after — and of the large nonportable undertakings make such specimens of the children's handiwork also available for display and competition. Prizes should be offered to stimulate such activities, and committees of prominent citizens should be interested in providing and awarding them.

The church. The church is the mother of education. During the Dark Ages it was the church which preserved all that was saved of learning and perpetuated the spirit and agencies for disseminating it. Modern school systems — elementary, secondary, and higher — arose through the initiative of the church. Now that the principle of public education as a fundamental responsibility of government is recognized there should continue to be the most cordial relations between church and school. There should, of course, not be tolerated the remotest effort to use the

public schools for sectarian ends nor to inject sectarian beliefs or influences into its instruction or organization. But the ministers of the several denominations are usually the most capable and willing people of the community for contributing to the broader activities of the school and effecting its wholesome correlation with the community. Their learning and public spirit is usually at the disposal of the teachers for the good of the schools. They often visit the schools to give a word of cheer and encouragement. In their pastoral work the various ministers can do much to strengthen the hands of the teachers and to secure the coöperation of parents by bringing about better appreciation of the aims and purposes of the school. Their close relation to their respective parishioners should count much in securing harmony and the highest efficiency in school affairs.

The obligation is mutual. On the other hand, it is the duty of the teacher to show by precept and example that he stands loyally for that older educational institution which exists solely for whatever is noblest and highest in life. He should honor and respect every church and work faithfully in his own. Like other good citizens he should not attempt to be in every church but to be useful in some church. With beliefs on which sincere, religious people are divided, the school has absolutely nothing to do; but any study of realities brings us ultimately face to face with the infinite and the unknowable, and here the true teacher should reverently point his pupils toward God. It is not necessary to teach religion, but it is vitally important to teach religiously. We may leave the teaching of religion to the churches, but we should help every child to feel that the truths of religion and a better understanding of things eternal and things divine is the most worth while of all the learning of mankind.

PROBLEMS

1. In any recent course of study indicate the materials intended specifically to relate the child to his environment.

2. What similar materials do you find in recent textbooks in science, geography, etc.?

3. From your own observation make a list of a number of facts of nature, life, and industry in your community which you regard as important for the children to be taught. Make another list of textbook facts which you think might well be displaced by the community facts if either must give way.

4. Sketch a plan for reorganizing your school so far as may be advisable to bring it into thorough correlation (*a*) with the industries of the community, (*b*) with the home life, (*c*) with the public and governmental institutions, (*d*) with professional men and interests.

5. Draw up a practical plan for encouraging home activities adapted for the school under your consideration.

6. How would you answer the argument that the school has already more than it can do to teach the fundamentals and ordinary subjects without attempting to cover the whole community?

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CHAPTER XXVIII

SCHOOL EXTENSION

Unrestricted service the new ideal. Our last chapter dealt with some of the ways in which the modern school is seeking to increase its usefulness by utilizing in the instruction of pupils the interest and coöperation of the entire community. The public school reaches out and gathers in more broadly only that it may more broadly and effectively serve. If it boldly lays tribute on all institutions and all classes of people that it can make use of, it no less actively seeks out every class of the needy and tenders its services. Indeed it forces its help on those who are blind to their own needs. In seeking financial support and educative influences alike, it takes from everyone according to his ability, but only that it may spend itself in rendering to everyone according to his need.

A progressive school system is no longer regarded as fulfilling its duty if it is content to dispense a narrow curriculum within traditional school hours to children of school age. School hours now are all hours in which someone can be found to be served with knowledge, training, or wholesome enjoyment. School days are any days of the year. School pupils are "all the children of all the people," regardless of health, mentality, poverty, family responsibilities, interest of the parents in their education, or any other thing but their need of schooling. Even here the modern public school does not draw the line. Regardless of age, the schools stand ready to help aliens to learn our language, the unlettered to acquire academic knowledge and culture,

USING CLASSROOMS AT NIGHT

Above, The Games Club, Boston, Massachusetts. Below, a millinery class, Vocational Night School, Richmond, Virginia

mothers to learn the art of making homes and wisely bringing up their children; to extend to any and all who will accept it whatever of learning or skill will best contribute to the elevation and enrichment of their lives. Economical efficiency for its method and limitless service for its aim — this is the ideal of modern public education.

An expression of this broader ideal comes to us from Pittsburgh:

> The schools of the people should give to the children:
>
> Ample provision for exercise and joyous play.
>
> Buildings simple, but stately; thoughtfully planned, skillfully built, generously equipped.
>
> A course of study offering training for service and appreciation; presenting in the order of their importance those things which contribute to a strong, healthy body, an alert, sure mind, a fine, steadfast spirit.
>
> Those things in art or craft which develop to the full the latent ability of each one to serve his fellows with dexterous hand, a lofty mind, and a glad heart, rich in response to the beautiful and noble in life.
>
> Teachers who love children with a parent's love and books with a scholar's fondness; who find beauty and joy in service; are large of vision, learners always.
>
> A training which leads from learning and doing on to wisdom, to high ideals, to service as a sacred trust, to worthy citizenship, to character.
>
> And, having given these things to the children, the schools of the people should also give to all citizens an exalted, neighborly life more abundant, making the big red schoolhouse a radiating center for the final good of all Americans and then for the world.

Waste through an idle plant. The need for enlightenment is too widespread and the school plant is too valuable for it to stand silent and idle all but five hours a day in a hundred and eighty days of the year. The long vacation itself has proved a serious problem. A costly school plant

stands closed and useless; teachers, out of employment, seek temporary occupation or go home and most unprofessionally live on their parents; while hundreds of children idly roam the streets, become bad company for each other, and forget much of what they learned during the past year. Three or four months are lost in this idleness, while at least another month is lost in starting and stopping the terms.

The summer close-down. The child who does not miss a day spends less than one sixth of his waking hours at school, while the average member of the school is there less than one eighth of the time that his mind is active and being educated. Commissioner Claxton estimates that less than five per cent of school children go away from home to spend the summer, less than ten per cent are engaged in any profitable employment, while the remaining eighty-five per cent are in the streets, alleys, and loafing places without occupation or guidance.

Vacation schools. For these reasons some hundreds of cities are now conducting "vacation schools." In most cases the provision for them is still meager. Teachers are few, and attendance, for the most part, consists of children who are seeking to make up individual deficiencies and thus avoid retardation. These quite commonly have the option of falling behind their grades or making up the work in vacation school. Special provision has sometimes been made for a select few who are sufficiently advanced to skip a grade by means of the summer attendance. To this extent the vacation school serves to even up the irregularities of promotion in the regular terms. But it is the inevitable consequence that special advantages for the few unusual pupils will ultimately be considered the right of the many average pupils. Thus the schools of the summer vacation months are coming to be considered the right of every child, and regular classes are being more and more conducted

with some adjustment of credits to permit summer attendance to count in accelerating progress through the grades.

All-year sessions. It is but a step from this to the full recognition of summer work as part of the school year, making an all-year-round school. Newark, New Jersey, the pioneer in this movement, has found its all-year-school plan exceedingly popular with both parents and children. Although attendance is voluntary in summer and compulsory during the remainder of the year, 84.1 per cent of the regular-term pupils attended the summer session, and the average attendance of those enrolled was higher in summer than in the other months. Both interest and scholarship are higher for the elimination of the long period of enforced idleness. Failures are fewer and the normal rate of progress covers as much in three years as is accomplished in four under the regular term plan. The schools are cooler and more comfortable than the average home or the street where the children would otherwise spend their time, and the regimen of life is far more hygienic; hence the health of children is as good or better. Teachers are much better satisfied with the prospect of longer employment and most of them are applicants for it, although, as with the pupils, summer work is optional. Instead of the plan's proving an additional expense to the city, it has been found an actual saving. It appears that the whole cost of educating each child is decreased about ten per cent under this plan. It costs less to give a child an elementary education in six years than in eight.

Part-time study. To meet the needs of the many older children whose time is required to help support themselves or their families, there are being perfected in several cities various part-time-study plans. This arrangement is effected by means of the coöperation between school authorities and the employers of youth. Children are permitted to attend

school part of the day and work the other part. Groups are organized to alternate study time and work time with other groups, thus affording regular employment and regular instruction for the children as well as a uniform supply of pupils for the schools and of laborers for the factories. The groups may alternate by half-days, by days, or by weeks, months, or terms. Some industries require help only at certain hours or at certain seasons, and the school seeks to adjust itself to meet this need. The courses also are modified in collaboration with the employers so that the instruction received is more or less successfully correlated with the work which the children are doing.

This coöperative scheme is solving several problems for the general good of all concerned. Instead of having to contend with erratic and sometimes unwise legislation against child labor and with the opposition of all friends of the school and of childhood; instead of having to employ only the defective, delinquent, or desperately poor children who cannot or will not attend school; instead of having to connive with parents and children to falsify age statements and employment conditions; employers are in hearty coöperation with the school authorities and may secure a reliable and desirable supply of child helpers by direct application to the schools. Class work increases the interest and the intelligence of the children in the particular employment which they have. Parents, instead of having to choose between the education of the children or their assistance in the hard problem of making ends meet, find that they can get both advantages under restrictions which preserve the health and welfare of the children and at the same time prepare them for further progress and higher wages. Schools secure the coöperation and friendly support of many industrial forces which have hitherto been largely antagonistic. Needy parents and pupils gain a new interest

in the school when this proves the surest way to a job and the only means of securing steady employment during the school age. School lessons are vital when related to the problems which affect this week's pay envelope.

The part-time plan is developing most rapidly in the manufacturing centers, but is also well adapted for farming and trucking sections, for large retail business communities, for messenger and delivery service, and can be utilized wherever numbers of children are employed. In Chicago the retail druggists have a successful coördination whereby high-school boys may spend a part of their time in pharmacy apprentice work and receive credit for the same toward graduation in a special pre-pharmacy course. In general, children are benefited by a reasonable balance between academic instruction and the exercise, training, and responsibility of productive economic activity. Idling is the bane of childhood, while work under natural, industrial regulations is one of its blessings. It is well that the industrial-education movement which is turning our schools into shops should likewise turn the shops into schools, and still better that it combine them both into a partnership for mutual benefit and for the welfare of the child.

Evening schools. Those who must labor all day are also the care of our modern public schools. For them, regardless of age, are provided evening schools in which anything may be taught for which there is a demand. From the "Moonlight Schools" of the Kentucky mountains, where the fundamentals are taught to three generations of learners at the same time, to the night high schools and vocational classes of the most progressive cities every sort of ambition for more knowledge or skill is provided for in evening classes, free or at a nominal cost for materials. Salesmanship, journalism, art, music; academic instruction of every sort and grade from primer classes for non-English-speaking

aliens to college-entrance requirements; printing, shoemaking, carpentry, plumbing, mechanics, and every craft; domestic arts and science; motherhood and sex-instruction; swimming, gymnastics, and dancing; military drill, wireless telegraphy, and aëronautics, — all are to be had for the seeking, though not all in any one city as yet.

The continuation school firmly established. Some cities are still dwarfed by lack of vision on the part of school boards and councils. A few of them have but little more than outgrown the conception of the public school as a necessary evil, closely akin to the poorhouse and free hospital. All are still crippled for lack of funds. But led by school superintendents of breadth and foresight and backed by progressive citizens, welfare organizations, woman's clubs, trades councils, and business associations, many sorts of continuation schools which were regarded as distorted visions a few years ago are now firmly established by both law and custom and are rapidly spreading to every section of the country and every class of pupils. Pennsylvania has a law limiting the labor of children under sixteen to fifty-one hours per week, of which eight hours must be spent in a continuation school. Wisconsin has a similar law, and other states are getting into line on like plans.

The National Association of Manufacturers expresses the industrial education ideal for the public schools in the following program, which they claim is favored by educators, manufacturers, and representatives of labor.

1. Two-years' and three-years' apprenticeship courses elective for children fourteen years of age and over who have had the equivalent of six years of the elementary school; with shop teachers selected from the industries, and the instruction so coördinated with local industries that graduates of the courses may be credited with substantial allowances on their apprenticeships.

2. Elective vocational courses for high-school pupils.

FITTING THE SCHOOLS TO MISFIT PUPILS

Trade classes in the Prevocational School, Richmond, Virginia

3. Evening continuation classes for adult workers, and day continuation classes for employed workers under sixteen years of age.

4. Practical training on real work and a commercial product.

5. Control by a committee of representatives of employers and skilled employees under the direction of, and responsible to, the regular board of public education, insuring close coördination between the industrial schools and the regular public schools.

Vocational guidance. Another phase of the school's responsibility now rapidly growing in importance and possibilities is that known as "vocational guidance." At first this was confined to recommending to individual children the sort of higher school or college which the adviser thought they should attend or the sort of occupation which he thought they would engage in most successfully. "This conception is rapidly passing, however," says Commissioner Claxton, "and among the leaders of the vocational-guidance movement the chief function of their work is now regarded as the study of vocational conditions and opportunities, and the making of the resulting information available to boys and girls. The most important service that can be rendered the individual youth, under the name of vocational guidance, is to set him to thinking, at the proper time, about the problem of choosing a life work as a problem to be seriously faced and prepared for — to make him fully conscious of its existence as a problem to be solved, and aware of the sources of data having any bearing on its solution."

The movement, however, is being extended to the actual assisting of pupils to secure employment, the supervision of the conditions under which they labor, and the advising with them both before and after they leave school regarding all matters pertaining to their employment. A considerable body of practical literature and some scientific methods of determining fitness for certain occupations have been developed,

and in certain cities expert vocational advice which would be beyond the capacity of the ordinary teacher is provided.

Center of community life. The efforts of the schools to enrich life do not end even with their extension to every phase of instruction which can be accomplished within and without its walls. Whatever enters largely into the life of the community, whether work, play, or amusement, if it can be taken over and by wise direction and purer environment be ennobled and made more worthy, that is a function of the school; that is a legitimate and wise use for the school buildings and funds which are the property of the people, contributed by the people, and for the people.

After the exactions of daily toil people must have a period of relaxation, of personal freedom and pleasure, of enjoyment. They crave companionship and the intercourse of social groups. It is this need of humanity which the saloons, dance-halls, gambling places, and low amusements have seized upon as their opportunity. It is the satisfaction of this social and recreational need which the schools, with cheering success, are now reaching out to lift to a higher plane. Many millions of profitable and delightful evenings are now spent annually in recreational activities in the public-school buildings. These include social and literary clubs and gatherings, lectures, concerts, art exhibits, gymnastics, dancing, parties, dramatics, athletics — everything that meets a social need. Moving pictures of a high order at a nominal price and free to children are a most popular addition to this evening service. Milwaukee has installed a large number of the best type of billiard tables in her public schools.

Reports received by the Bureau of Education indicate that somewhat over 500 cities held after-school occasions of a social or recreational character during the school year ending June, 1916. In about 150 of these cities there were

paid school extension workers other than teachers in the regular night schools. In about the same number of cities there were some schools in which the evening occasions averaged once a week or oftener during a period of thirty weeks. School buildings were used as polling places in 133 cities and for holding primaries in 112 cities. The Bureau regards these figures as an understatement of the actual facts. This does not include at all the widespread use of the buildings in a corresponding way in the country districts and small towns.

Supervision of social activities. Supervision of these community-center activities by competent persons is necessary, and usually there must be guidance and instruction at the first, though the aim is to make them unhampered and to develop as much initiative in the participants as possible. The people themselves recognize the moral and uplifting atmosphere of the school and will not tolerate there the objectionable sort of language and conduct they would freely laugh over elsewhere. The very environment tends to lift their amusements to a higher plane. The following regulations of the school board of Joliet, Illinois, are typical of the liberal and sane provisions of many cities.

In order that the public school plant may serve a wider community use, the board of school inspectors will bear the expense of lighting, heat, and janitor service when the school is used for the following purposes:

1. Adult clubs or organizations for the discussion of educational, civic, and community problems.

2. Public lectures, entertainments, or indoor recreational or educational activities.

3. Club work among young people — literary, musical, dramatic, social — under supervision arranged by the school authorities.

4. Political discussions may be permitted when announced in advance and equal opportunity given for presentation of both sides of the question, in accord with the American spirit of fair play.

The above activities must be determined and controlled by a free organization of patrons and teachers of the community. The present rule barring the use of tobacco on school premises must be respected.

PROBLEMS

1. Draw up plans and, so far as practicable, make estimates of the cost of introducing the following extension features into your school system:

(*a*) Eight or ten weeks of vacation schools for deficient pupils only.

(*b*) Same for all pupils.

(*c*) Part-time classes to correlate with any local industries which employ children under eighteen years of age.

(*d*) Evening classes for foreigners learning to speak English.

(*e*) Evening classes in such industrial training as may seem desirable.

(*f*) Utilizing the schools for and supervising community literary exercises — games, dancing, etc. — for groups of different ages.

(*g*) Farmers', workmen's, or mothers' clubs, etc.

(*h*) Musical, military, or other training.

2. Prepare a course of study for eight weeks' vacation school which would meet the needs for the deficient pupils of the grammar grades.

3. What plan would you adopt for persuading the people of the importance of such opportunities if provided and for getting them to make use of them?

4. Make general recommendations as to such of these extension activities as you think should be undertaken under the conditions which prevail.

5. What industries in your community are of sufficient importance to justify adaptation of the school work to them in the way of vocational training? Which would justify the part-time study correlation?

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CHAPTER XXIX

SPECIAL DAYS AND OCCASIONS

A teaching device. The special day is a teaching device. As such, its exercises should consist in the pupils' activity. Its success will depend on the thoroughness with which it is planned, the clearness with which the *aim* is kept in view, the efficiency of the motivation, and the persistency with which the lessons taught are followed up and applied. The purpose of the occasion is to focus upon one particularly important idea all the thought and efforts of the day, thereby launching that idea into the current of the child's experience and interests with an impetus that will insure its becoming a factor in his life's ideals and attitudes. An effective dominant ideal, such as is sought through the special-day exercises, involves (1) the vivid and attractive presentation of *a body of relevant knowledge* together with (2) the arousing of *appropriate emotional responses*. Neither knowledge getting nor any emotional state of permanent worth in conduct can be attained by a passive pupil. *The special-day exercise is a means of intensifying educative activity.*

Any truly great cause is as worthy of the time and effort devoted to such special occasion as are the commonplace topics of the course. Instead of being introduced at the sacrifice of regular lessons, if properly correlated it should most effectively motivate the study of the common subjects. Geography and history are vitalized by anniversary celebrations; science, hygiene, and economic studies by Arbor Day, Bird Day, Health Day, and similar events; literature by the birthdays of authors; while every such occasion gives

unparalleled opportunity for training in the formal studies, — composition, spelling, reading, and perhaps arithmetic. Public speaking, singing, dramatics, and some other accomplishments have little genuine motivation except on such special occasions. The mere breaking into the low-pressure monotony of daily work is often in itself a most profitable circumstance. Each such occasion should be made to contribute genuine economy and efficiency to the regular work besides affording its own peculiar values. It may sometimes be true that special-day exercises are a waste of valuable time. If so, that fault is with the utilizing and not with the possibilities of the occasion. It is our purpose here not to discuss methods of making these special occasions contribute to general educative values, but to insist that they should do so.

Occasion gives teaching aim. As to the idea or cause for which the day itself stands, the aim will vary with the particular occasion. There are the birthdays of national statesmen and heroes, in which the aim is to exalt in the minds of all the people the virtues which these men exemplified, to endear to each successive generation the causes for which they stood, to vivify the historic facts which cluster about them, and to dignify the country's history by enriching the general knowledge of its great events and crises. Yet how often is Washington's Birthday "observed" by merely closing the schools and making it a day of idleness or of mere pleasure-seeking.

There are the birthdays of state and local heroes of war or of peace, of industry or of ideals. Individuals conspicuous for any virtue or achievement which may be held up for the admiration of the people and emulation of the youth are fit subjects for such special honor. The proximity of their homes, scenes of their labors, or results of their achievements should help to make the exercises concrete and more effective. We say often that we seek to honor the great

ones whose achievements we celebrate. But the dead cannot and the truly great would not be honored except through our realizing their ideals and purposes, by our continuing the work which they began, executing wisely what they planned, and bringing to fruit in the lives of the young the seeds of nobility which they strove to plant.

Great authors are honored by making their personalities dear and their works familiar to the new generations of readers. They can live only in the minds and hearts of people. By projecting what is noble of their works into the lives of pupils we immortalize them and ennoble mankind. The public schools have a rare opportunity to serve humanity by using rightly the birthdays of the best authors, but not by making such occasions perfunctory.

Honoring or dishonoring. The anniversary celebrations of great occasions of every sort bring each its own opportunity for instilling patriotism, love of state or town, loyalty to some cause or ideal of supreme importance. An occasion which stands for no high ideal is unworthy of celebration, and a celebration which does not stand for that ideal is unworthy of the occasion. It is a national dishonor that the Fourth of July became so largely a day of mere noise, recklessness, and riotous pleasure-seeking until rescued in some degree by the campaign for a "sane Fourth"; or that Thanksgiving Day to many is a symbol of licensed gluttony. It is Pagan that Easter should be impatiently awaited as the signal for social excesses in reaction from onerous restrictions of Lent. It is worse than heathen that Christmas should become a day of mere hilarity and dissipation.

Recreation is not celebration. All who work need days of *vacation*, which means days of emptiness, of doing nothing. We need days of *relaxation*, of letting down, of loosening rigidity and tension — of rational "cutting loose" if you choose. We need days of *recreation*, of re-creation, renewing

vitality and strength, of upbuilding. But these are quite different from days of *celebration*, of making someone or something *celeber* — famous, renowned. They are very different from *holidays* which are *holy-days*. The travesty on civilization is not in the wretched misuse of the words, but the tragic misuse of the days. A mark of every degenerate age and nation has been a great multiplicity of feasts and fasts in the name of patriotism or religion, but devoted to license. Let it be a sacred trust of the public-school teachers throughout our land to make sure that every day which is observed in the name of any noble cause shall leave the children of their schools a little nobler through a better appreciation of that cause. Increase so far as need be the days of relaxation and vacation, but let holy-days be holy to some holy cause and let celebrations increase the renown of some noble person or event. Holidays are not hollow days.

Relative importance. Special days are set aside by various authorities in the interest of sundry propaganda. It is reasonably sure that these causes are all worthy. The danger is that in attempting to observe them all, the celebrations will become too common or too commonplace to be effective. Many of them are suitably honored by being made the special theme for morning exercises or the correlation center for the day's reading and composition work. Others will justify the interruption of the daily schedule and will warrant more or less elaborate preparation and public exercises. Not merely the importance of the cause itself but the need of accenting it in the life of the pupils and of the particular community must determine the degree of consideration to be given it. Arbor Day needs emphasis in the treeless plains and the barren boom-towns or factory settlements, but not in beautifully shaded suburbs or in the crowded city where there is no chance to plant a tree.

Form and aim. Some of these special-day causes, such as Peace Day and Flag Day, seek only a sentimental attitude. Others, like Arbor Day, Bird Day, Good-Roads Day, or Health Day, may seek to have the sentiment ripen immediately into concrete efforts. Still others are intended strictly to initiate some practical movement for the community good. Such might be a Clean-Up Day, City-Beautiful Day, Better-Crops Day, Get-Acquainted Day, Fire-Protection Day, and the like. Some of these occasions seek to educate the children only, and some to influence children and parents together. Some are local in interest and aim; some are as widespread as the nation or civilization. Some are among the means by which the school reaches out for varying materials with which to enrich its instruction of the children; others are means whereby the school extends its activities and resources for the benefit of all the people.

Manifestly the nature and arrangement of the exercises must vary quite decidedly according to which of these numerous aims may prevail in any particular occasion. A great abundance of suggestions and materials, arranged in complete detail for such celebrations, is afforded in numerous government and state bulletins, in educational periodicals and books, and in the publications of the propagandists supporting the movements. The all-important thing for the teacher is to keep clearly in mind the aim and make sure that what is done contributes to that aim and not merely to "making the occasion a success."

Resulting attitudes. One must be careful that a wrong emotional attitude is not aroused. Arbor Day was intended to develop a tree-loving, tree-sparing, and tree-planting people. In the first enthusiasm and general extension of the celebrations thousands of school yards were filled with trees stuck in without plan or care and destined to die. The

inevitable result in such cases was that tree-planting became a travesty; trees were wastefully destroyed, and lessons in neglect and in the folly of planting trees were instilled.

Peace Day should result in a genuine love of righteous peace and horror of needless war. Flag Day should inspire a reverence for the symbol of the nation and a willingness to live or to die for the glory of the country. Road Day should contribute tangibly to producing a nation of road-builders. Says Commissioner Claxton, "The roads are not built, because people do not understand their value nor comprehend how much beauty they would contribute to the country and how much pleasure to life. It is largely a matter of sentiment and ideals. These ideals are most easily created in childhood. What one would have in the State of to-morrow must be put into the schools of to-day." The same may be said of all great causes.

Reaching the patrons. Any important movement for local progress or civic betterment, provided it is nonpartisan, nonsectarian, and strictly for the community's good, may be the subject of special school exercises. The more local and pressing the need, the more vital will be the study and discussion aroused. The fact that the school exercise does not seem primarily an attempt to teach the parents gives the teacher better opportunity for community service and community leadership. It may be presumption, and would probably be so regarded, to invite the citizens to school to be instructed how to make their homes sanitary. But they will gladly come to hear their own children read essays, quotations, and scientific articles; to hear debates, songs, and dramatizations; to study exhibits and hear addresses of experts; all bearing toward the same end.

Patrons' Day is a means of getting the parents to the school — sometimes with the aim of showing them the progress the children are making by exercises and exhibits;

sometimes for discussion of school problems to the end of a better understanding and coöperation; sometimes to get them to contribute time or money for some school improvement; often for all of these ends. Where there is a domestic-science class, lunches or refreshments are usually served by the girls. Brief talks by school officials and patrons tend to crystallize sentiment favorably to the improvement of school facilities. It is not so much what is said as that the people are talking themselves into school enthusiasm. Very often these meetings are the means of initiating the movement for new buildings or other extensive developments.

Special weeks. Under some conditions it is advisable to devote a week instead of a day to certain ideals or policies. In a school of small resources many feeble efforts had been made without appreciable result to get industrial work under way. An "Industrial Week" was planned. All regular work was either based upon or waived in favor of the various forms of manual work which were being inaugurated. Meetings of older people were held nearly every day and evening. Money was contributed, equipment secured, and the work placed on a firm footing for future development.

Practical points. A few practical suggestions will close our discussion of special days.

1. Go to headquarters and get the best plans and materials. The United States Bureau of Education, the state departments, and the central offices of the agencies promoting the causes usually furnish these free of charge.

2. Begin in time for considerable preliminary work by the children. The occasion is the incentive, but the working up to it is the means of getting the children in thorough sympathy with the cause. There should be more or less gathering of data from the libraries, preparing of papers, orations, and debates, drilling in songs and marches, and arranging of exhibits, diagrams, and mottoes.

3. Enlist the coöperation of representative citizens by giving them some part in either the program or the arrangements. Remember that getting an individual identified with a movement persuades him far more effectually than any sort of argument. It also helps powerfully to persuade others.

4. In selecting children to participate in such exercises use (*a*) those who have the ability to do well what they undertake, but also (*b*) those who will bring into sympathy the parents and others whom you are particularly interested in reaching. One feels identified with a cause in which his child is taking part. But this usually necessitates group exercises or dramatization in which many of mediocre ability may participate.

5. Have abundant action and movement. Short and striking speeches driving home one point at a time are more effective for children and for most people than long and logical addresses. Plays and music will interest many whom recitations and essays will bore. Graphic representations and dramatizations will be remembered when the logic of addresses is forgotten. Most people favor a cause when they are pleased with its presentation rather than because they understand it.

6. Avoid arousing enthusiasm to no purpose. If something is to be done, get it started when interest is high. Follow up the lesson of the day with frequent references and applications in the work of the classroom.

School fairs. The school fair is a recent development fraught with incalculable values in stimulating school work and public interest. It is organized much as any other fair, with contests, exhibits, and prizes. The existing school administrative machinery makes the planning and organization a relatively simple matter. It may be held in conjunction with an agricultural or other fair, but it is better to let the schools have the entire stage to themselves. A

county or similar territory not too large for children and people generally to come from the remotest part should be included in the territory of the fair.

A fund for prizes is readily contributed by school boards, county commissioners or supervisors, business and industrial organizations, school leagues, merchants, and individuals. A catalogue is issued as far in advance as possible, designating the contests in which prizes are offered, the conditions of each contest, the classes of competitors, and such rules as may be necessary. Experience shows that a few clear rules are all that is desirable. The catalogue may contain advertising sufficient to pay for itself.

Only *bona fide* pupils of the public schools of the fair district should be permitted to contest. These should be divided into three classes: primary, grammar, and high-school pupils, with separate contests for each, though pupils of a lower class may compete against those in any higher class. Some special prizes should also be offered for first-grade and second-grade pupils. Group work may be encouraged by offering prizes for group projects more difficult and pretentious than would ordinarily be possible for an individual. Surprisingly fine results in academic and manual work have been attained in this way. By offering prizes for a wide range of achievements children of every type are encouraged. Academic excellence and every sort of handiwork, drawing, cooking, sewing, declamation, music, athletics, gardening, and even health habits and regular attendance may be effectively stimulated. Work done in school or out of school should be included. Particular emphasis should be placed by means of more and larger prizes on any particular accomplishments in which the schools are weak. Whatever you would see developed in the schools, put it in the prize list. Instruction of almost any kind will find its way into the school when the children are sufficiently anxious

A SCHOOL-FAIR PARADE

The parade was reviewed by the governor of Virginia on the athletic grounds of the College of William and Mary

for it. The children will find someone in school or out of it to show them how to do the thing for which a prize is offered.

Power of prizes. A prize of two to five dollars will literally put hundreds of children determinedly and persistently to work on most difficult tasks. The prize-winning performance at one fair is taken by all the contestants as the standard which they must excel at the next fair. Standards of attainment advance by surprising leaps from one annual fair to another. Parents soon decide that if other children can accomplish such work as is exhibited, their own shall not be denied the facilities or kind of instruction that will give them like opportunities.

The objections to prize-giving previously mentioned are not serious under the conditions of a fair in which many schools are contesting. Particularly unobjectionable are prizes offered for group projects — those offered to schools or to grades or given for general excellence.

The parade. The parade is among the most intensely interesting features of such an occasion. With band playing, colors flying, school yells and songs much in evidence, there is developed an enthusiasm and an *esprit de corps* among the children and a thrill of pride among the parents which perhaps nothing else in school life can equal. The procession should pass a reviewing stand, where some committee of distinguished visitors awards the prize for excellence in marching and general impression.

In a Virginia school fair one large rural school marched with every boy and girl in blue-checked homespun, each boy carrying a hoe and each girl a broom. Another school had every child and teacher in a white "middy suit." Such uniforms are so useful and cheap for general wear that the cost is practically nothing, but the impression made by several hundred children marching with uniforms, banners, songs, and yells is one never to be forgotten.

PROBLEMS

1. Review the manner in which you have seen certain school holidays observed and criticize according to actual educative effect.

2. Make a list of the special-day occasions which you think it particularly desirable to observe in your school. Give reasons for your choice.

3. Make plans for the observation of one or more of these, pointing out the precise educative aim and the definite means of attaining it.

4. Indicate special needs of your community which could be contributed to by means of special exercises or meetings in which children and parents might participate.

5. Prepare a plan for "Patrons' Day," beginning with the aims or needs to be sought and indicating the means of attaining them.

6. Write out a general plan for a school fair, to include your school with others. Indicate the sorts of school work you would seek to stimulate and the contests you would organize in these.

READINGS

SETTLE. County School Fairs in Virginia.

Farmville (Virginia) State Normal School; Training School Work for Special Days.

United States Bureau of Education Bulletins

Bulletin No. 8, 1912, "Peace Day" (Andrews).

Bulletin No. 26, 1913, "Good Roads, Arbor Day" (Lipe).

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CHAPTER XXX

THE TEACHER'S RIGHTS AND DUTIES

Friction and lubrication. All relations of persons to each other involve opportunities for discord and conflict. The relations of the teacher are particularly complex and delicate and offer unlimited occasions for friction. Teaching implies an unceasing adaptation to the idiosyncrasies of some twoscore unsettled and irresponsible pupil personalities, of a larger number of deeply concerned parents, and of a varying number of supervisors, superintendents, and superincumbent board members. We have seen that in its best development teaching involves vital contact with almost every aspect of the life of the community. And at every point of contact there must be the lubrication of tact, good judgment, and sympathy, if friction is to be avoided.

Rights and duties. Laws and regulations mark off the line of contact and possible conflict. They indicate one's rights and duties, and a teacher should know these clearly. But laws mark the limits beyond which one may not go — the maxima of rights and the minima of duty. The wise teacher knows his rights that he may keep far within them. He knows his duties that he may far exceed them. The whole attitude of a teacher who declines every duty that is not prescribed or demands every right that is not proscribed is an incessant irritant and provocative of friction. He who always "stands on his rights" soon plunges into wrongs. That teacher who does *only* his duty fails in the duty that is highest. It will be well, nevertheless, to outline some of

these rights and duties of teachers that we may the better give more than is demanded of us and demand less than is given us.

1. *Regulations.* It is a right of every teacher to receive in convenient and easily understood form all legislation and regulation relative to his work. Statutory requirements are supplemented by regulations of various state and local boards of education, boards of health, sanitary and fire commissioners, superintendents, and other officials. There may be numerous rules of the particular school and sundry routine reports, requirements, and customs. All these should be simplified, clarified, and codified, and supplied to each teacher in black and white.

It is the teacher's duty to study these laws and regulations thoroughly and to carry them out in spirit as well as in letter — sympathetically and freely, not carpingly or grudgingly. The letter of the law is the irreducible minimum of requirements. It is the beginning, not the end, of duty.

2. *Contract.* A teacher having accepted an appointment is entitled to a contract specifying the term of employment, salary, mode of payment, hours of daily service, authorities to whom one is subject, and extra duties. This is legally binding on the board and no less so on the teacher. To abandon a contract at one's convenience, knowing that because of one's financial irresponsibility the board has no legal redress, is dishonorable. Any contract may be terminated and any position resigned after due notice and with the consent of the employing authority. Quite properly, superintendents are refusing to give indorsements to teachers who violate their contracts. Often such teachers are blacklisted, and the laws of some states punish the violation of contract by suspension of certificate.

3. *Accepting position.* One may apply for as many positions as he pleases; the uncertainty of election makes this

necessary. He may decline to accept when elected. He may ask for time in which to accept, though no board is under obligations to grant the delay. But once having signified his acceptance he is bound in honor to fill the position unless freely released by the employing authority. One may properly insist upon favorable sanitary or other improvements being made as a condition of his acceptance, but not as an excuse for breaking an engagement once made. Having given his word, he is morally bound as truly as if the contract were signed. As soon as he has accepted a position he should withdraw his applications for any others. School boards are often burdened with countless wholly presumptuous and undesired applications which they are under no obligations to consider, but applicants who have been under consideration, or have good reason to suppose that they have been, are entitled to know when they have been rejected as well as when they have been accepted. The prompt information may be more necessary for the unsuccessful applicant than for the successful one.

4. *Right to a place.* A teacher's only claim to any position is his fitness for it. Of the candidates for a desirable position there are often several among whom no one can with certainty determine which has the greatest actual and potential fitness. It is then that a personal acquaintance, a word in time from a mutual friend, may determine the selection. Until our system of preparing, measuring, and selecting teachers is far more perfect, chance and less creditable factors will often have much to do with the selection of teachers. It may therefore be regarded as a right and perhaps a duty of a young teacher to cultivate a wide acquaintance among educational authorities and among those who have influence with them. The leaders in other professions seek business through cultivating influential friends and acquaintances.

But this sort of doctrine quickly degenerates into mere "pull" or boast. Friends worth while are not willing to be used to bolster up pretensions not built on genuine worth. Pompous self-praise and feminine wiles have been used so often that school boards even in remote sections are becoming very suspicious. Frequent press notices bear their own evidences of pretense. Whatever means one may be tempted to use to get the attention of employing authorities, — and none is better than a personal interview, — the only sort of pressure that is professional or profitable is evidence of fitness as shown by the record of previous achievement.

5. *Tenure.* School boards generally recognize the desirability of retaining teachers as long as possible. In making changes boards are often too slow for the good of the schools. But it is the right of the teacher to feel that, whatever the duration of the contract, one's tenure of position is safe so long as his work is efficiently done. A successful teacher should have no anxiety as to the permanency of his position. On the other hand, the teacher has no claim to a position except his fitness, and a board should very properly resent any other effort to retain a place. The use of personal friendships, social acquaintances, the intervention of parents or pupils, or other efforts to place a board in an awkward or difficult position, should be regarded as a violation of professional ethics and of a proper sense of honor. Any sort of appeal to social, sectarian, or political pull as a means of holding to a position should be regarded as a confession of lack of genuine worth.

6. *Indorsements.* On leaving a position or at any time one may desire to apply for another position he is entitled to a fair and frank statement from his superintendent as to his success in the work done. It will be a good day when definite ratings without personal bias can be given. Then any teacher should be entitled to know just how he is rated.

As it is, superintendents and officials have been forced to the policy of giving few or no indorsements into the hands of the person indorsed, in order to protect themselves from occasionally having to face the alternative of saying empty nothings or writing frankly and having what they have written converted into ashes and hard feelings. Worthy teachers have no hesitancy in standing on their records and others have no right to embarrass officials by asking for to-whom-it-may-concern testimonials. Teachers have the right to give a former or present superintendent as reference, and the employing authorities should write to him for such frank, confidential opinion as they may desire. One such direct statement is usually more effective than many sent through the teacher.

7. *Exemption from interference.* Every teacher is entitled to protection from all interference in the discharge of his duty. In several states the statutes specify that upbraiding or insulting a teacher in the presence of his school is a misdemeanor. In school not even parents may interfere with the teacher's management or control of their own children. But if the teacher is to enjoy this exemption from interference in school, it imposes upon him an obligation to keep in touch with parents out of school hours in order to secure their confidence by sympathetic conferences and consultations. A wise teacher will decline to discuss discordant questions before the pupils, but will seek a better understanding with the parent at some more appropriate time.

8. *In loco parentis.* With some variation in laws and regulations, it is pretty generally established that the teacher has control of the child in school, on the school premises, and on the way to and from school. He has no control after the child has reached home, although many troublesome cases have arisen through the punishment of children for offenses committed while loitering along the way after

they should have been at home. Obviously the wise policy, in case there is any possible doubt of jurisdiction, is to go to the parent in a spirit of helpful coöperation, to offer assistance if desired, but to invite no trouble which can reasonably be avoided. Certain aggressive young men and irritable old ladies seem peculiarly prone to create discord by attempting to extend their authority too far. This is usually resented and quite often marks the end of one's usefulness in a community. The right personal relations, indeed, render kindly reproof, a word of caution, or a serious conference more than welcome to either parent or child; but punishment by a questioned authority almost inevitably fails of its purpose and leads to trouble.

9. *Right of punishment.* As already indicated the right of the teacher with regard to corporal and other punishment is often limited by state law or local regulation. These restrictions have arisen from the growing realization that the best teaching and the surest authority are not dependent on physical coercion. A teacher who accepts a position where such restrictions are in force owes it to his position not to be finding fault with the regulations but to prove that he is one of those teachers who do not need the forbidden means to maintain authority. He should keep the law to the letter and rise far above it in the spirit of his teaching and discipline.

Could an adequate supply of competent teachers be insured, it would undoubtedly be the wiser policy to vest unlimited authority as to punishment in the teachers and then hold them strictly responsible for the right exercise of it. But boards must deal with teachers as they are, and the restrictions seem to be justified by their successful operation in many city systems.

10. *Courses and methods.* It is the duty of the teacher to carry out carefully and sympathetically whatever methods,

courses, and plans of instruction the higher authorities may formally prescribe. These should be given in no more detail than is essential to secure necessary uniformity of results, except as further details tend to assist with suggestions and guidance for daily work.

It is the right of every teacher to plan the details and methods of his work, so far as they are not prescribed in advance, without fear of criticism or interference. No superintendent or supervisor has the right to criticize any teacher before the class, and the supervisory function should in no wise hamper the initiative and originality of the individual teacher.

11. *Personal conduct.* One is entitled to select his own boarding place, his own mode of life, his own companionships and associates. Outside of his prescribed duties his time is his own to use as he sees fit. His forms and times of recreation are subject to no authority but his own. He is at liberty to attend any church or none.

On the other hand, he is unworthy to be a teacher who does not recognize that he is a public personage, under the public eye, and that his influence is leaving its impression for good or ill, out of school as well as in it. He has no more sacred duty than to keep himself above the suspicion of evil and to forego many things which may be harmless in themselves for the mere reason that they might be misconstrued by some overcritical people of the community or have a bad effect on the young whom his life may be consciously or unconsciously influencing. It is a supreme duty of a teacher to associate himself always and actively with those influences which stand for righteousness, morality, and community betterment.

12. *Coöperation.* Coöperation is both the teacher's right and the teacher's duty. The *co-* means "together" and the *operation* means "work." The word does not mean "work the other fellow," nor yet "everybody is boss." It means

neither dictation by a superior nor submission by an inferior in rank. Nor yet does it mean that the superior must not lead or the inferior not obey. Leadership and obedience are absolutely essential to effective organization, and effective organization is the very basis of successful coöperation. Superintendents, principals, and teachers must all be ready and glad to work, to do all that the contract calls for and at times a great deal more. Each must do all his own duty and also help the other where he can. "Bear ye one another's burdens . . . but let every man prove his own work . . . for every man shall bear his own burden." Supervisory officials are selected by virtue of their fitness to lead, guide, and aid the teacher in the ranks; but effective leadership consists in getting subordinates to think for themselves, to act independently, to have initiative, and to confer upon general plans, even more than it consists in merely working them. The higher official should seek, respect, and carefully consider the suggestions and opinions of subordinates. He should realize that the opinions of subordinates are often much better *for them to carry out* than his own can be. Nevertheless, it is his task to decide all problems except the internal questions of the classroom; and when his decision is made, the *coöperation* of the subordinate is simply *obedience*. Whatever may have been his own opinion, the individual teacher owes his most loyal and hearty support to the policy adopted and the instructions given.

13. *Courtesy*. Finally, every teacher is entitled to courtesy and deference from associates and superiors. But in receiving it one is equally bound to render it. The relations between the members of any teaching corps should be at least the same that should maintain between gentlemen and ladies elsewhere. Not only is this a personal right and duty, but it is a condition without which a wholesome schoolroom spirit and example are impossible.

PROBLEMS

1. From your state laws and local regulations list the prescribed rights and duties of teachers. Indicate carefully the mandatory duties and the prohibitions.

2. Make a statement of the legal relations of the teacher to (*a*) school board, (*b*) superintendent, (*c*) principal, (*d*) parent, and (*e*) pupil.

3. What duties not prescribed by law are specified in the form of teachers' contract used?

4. Write, for criticism by the instructor, a letter of application for some position, giving all the facts regarding yourself which the employer should know and giving references to responsible persons who can speak as to your personality and work.

5. In any case of trouble between a teacher and parent, for which you can secure the data, judge the teacher's position as based on his rights. Did a contention for rights in any measure cause the trouble? Would the teacher have accomplished his ultimate purpose better by not contending for his rights?

READINGS

ARNOLD. School and Class Management, chaps. iii–vi.
CHANCELLOR. Our Schools, their Administration and Supervision, chaps. xi, xv, xvi.
CUBBERLY. Public School Administration, chaps. xiv–xvi.
CUBBERLY. State and County Educational Reorganization, Title V.
CULTER and STONE. The Rural School, chap. xvii.
HOLLISTER. The Administration of Education in a Democracy, chap. xviii.
PAGE. Theory and Practice of Teaching, chap. xii.
PERRY. The Status of the Teacher, chap. iii.
SALISBURY. School Management, chap. vii.
SEELEY. A New School Management, chaps. xviii, xix.
School Laws of your State.
United States Bureau of Education
Bulletin, No. 47, 1915, "Digest of State Laws relating to Public Education" (Hood).

CHAPTER XXXI

TEACHER SELF-MANAGEMENT

Self-management in school management. Throughout this work we have had in mind the ordinary teacher; so in this final chapter we must forego a discussion of the ideal, who exists only in dreams and poetic imagery, and deal still with that real, everyday teacher — like the reader and the author — with all the failings and limitations which we both know so well. And we know that, after all is said, our own limitations are our most serious problems in the conduct of schools and in the management of children. We must know that the first essential of school management is self-management; that he that ruleth his own spirit is greater than he that taketh a city. We have been careful to advocate only those plans and methods with which everyday teachers like ourselves can succeed and have succeeded. But countless teachers, as able and as deserving as we, have dismally failed in their work or have suffered untold discouragement and wasted the best of themselves needlessly, for the lack of judicial self-management or of personal qualities quite attainable. Therefore let us look for a while at some of the controllable factors within the teacher which make for his success.

Academic preparation. At the beginning is the preparation for teaching. Jacotot said very truly that "one may teach that which he does not know," but the attempt to do so literally has often spelled disaster. One must know a great deal more about his subject than he expects to teach if he is to bring force, enthusiasm, or sane balance to his

instruction. He cannot hope to inspire pupils or project their interests beyond the narrow tasks of the day unless his own experience in the subject of study is broad and rich. It is an accepted principle that, so far as academic knowledge of subject matter goes, the minimum preparation for a grade teacher should be high-school graduation, and for a high-school teacher should be college graduation. But this is only the beginning. To teach vitally, one must be a constant reader. The monthly magazines and daily papers contain abundant materials and suggestions to vitalize the textbook work of the school classes. An habitual reader of good books will find them a constant source of enrichment both of his personal life and of all that he teaches.

Common facts. There is a wealth of information around one on every hand if only his eyes and ears are open and his mind alert. Nature and one's neighbors afford a marvelous insight into the things of most worth in the common subjects. Travel, however limited, is full of suggestion and revelation. Table talk and fireside conversation need not be pedantic to be full of helpfulness to one who seeks to get knowledge rather than to display it. The cumulative value of such wide-awake gleanings from daily life is a tremendous asset in making teaching worth while even as it is in making living worth while.

Quacks and teachers. Fullness of knowledge, however, does not make a teacher any more than a stock of drugs makes a physician. There was a time when a few simples and a knack of administering them was all that was necessary for a doctor, and so there was a day when a little learning and "a way with children" sufficed for a teacher; but either such a doctor or such a teacher in this day should be regarded as a quack. There has grown up a body of scientific knowledge of children and of the laws of their development without which one may not hope to be

regarded as a real teacher. There have been and probably will continue to be fads and much of shallow speculation and sentimentality, but the true practitioner must master the underlying fundamentals of educational science and learn to avoid the vagaries. Despite all erratic tendencies, in which it has shared the experience of medicine and other professions, few sciences have made more rapid, solid, and permanent progress than the science of education.

Professional study. To be a teacher of more than rule-of-thumb possibilities, one must know this basis of educational psychology. He must be familiar with the principles of its application to the art of directing child activities. He should observe much good instruction and analyze it in the light of his principles. He should have clear conceptions of the aims in all educational processes and the essentials of the methods by which they are attained. He should know the problems of hygiene and organization which arise from school conditions and the manner of their solution — which is the field we have considered in this book. He should have as a background for all his professional studies, to give them balance and perspective, some knowledge of the history of education. Furthermore his knowledge should be tried out, seasoned, and brought from the shadowy realm of ideas and images to the bedrock of practical experience, by teaching under observation and criticism. All this constitutes the professional side of a modern normal training course. It should be borne in mind that lectures and textbooks on pedagogy can never make a teacher, nor can observation lessons, however beautiful. Only independent thinking can make books effective by interpreting what is said and what is read into specific instances of actual school life. No pedagogical theory or logic should be mistaken for a teaching asset until it has been made concrete.

A continuing process. The normal course, like a general academic course, is only a beginning, a getting started right. Genuine professional education continues all through life. As in liberal education, there is a wealth of literature constantly coming from the press, any of which may happen to be as important and as epochal in one's development as the best that has passed. A growing teacher is necessarily a reader of the cream of the new professional books in his field and some of the best educational periodicals. Among these latter will be his state journal, one or more of the journals of methods relating to his branch of teaching, and at least one of the high-grade magazines of general educational interest. Again, as in the general enrichment of one's life and knowledge, the experiences and opportunities of every day are the steps by which one rises in his profession. In the classroom, in conversation with children and parents and people generally, one is constantly getting a newer and truer light on the motives and values in education as seen from the side of the pupil, whether a pupil of to-day or of a generation ago. This is a most wholesome corrective for impractical theorizing. Visiting other schools and classes is always rich with profitable suggestion. He must be petrified indeed who does not grow hourly in professional zeal and ability under the stimulus of visiting often in new classrooms with new buildings, teachers, methods, and new groups of children to see. A partial substitute for this visiting privilege is afforded, along with many other professional advantages, by the occasional gatherings of teachers in institutes and conventions. Professionally, as spiritually, mentally, and physically, *growth is the only preventive of decay.*

Keeping physically fit. A professional asset of the highest worth is physical energy; not that school demands heavy physical work, but it does require that poise, good

nature, and enthusiasm which only abundant energy can supply. Irritability, fretfulness, and depression are common products of a weakened physique, and they are sure trouble-makers in the classroom. Hence it is the professional duty of every teacher to keep himself in the best physical trim at all times. Worry, too long hours of confinement or of work with lessened vitality and increased nervousness and impatience, are professional sins. Keeping-in of pupils, if indeed the practice is ever justifiable, is pernicious when it prevents the teacher's having a needed walk or ride or game in the open air. Encroaching upon the hours of rest to mark class exercises is destructive of teaching force and so of thoroughness and efficiency. One as truly owes it to his position not to sacrifice his sleep, rest, recreation, social life, and peace of mind for daily tasks as he does not to sacrifice the tasks to these pleasanter things. Professional zeal which is destructive of the human joy of living is merely professional folly. First of all be a real man or a real woman, with real human joy and physical vitality.

How to fill a full day yet fuller. But when "all the time there is" is too little for the countless duties incident to the school, how is it possible for the weary teacher to rest and read and play and visit and travel? In short, how can one be a teacher and be thoroughly human at the same time? As a bushel measure that is heaped up with potatoes may still hold several quarts of beans and then some pints of sugar and a considerable quantity of water besides, and yet be no more heaped up than with the potatoes alone, so a day that is filled with all the school work that it can profitably hold may yet provide for recreation, rest, and reading.

This is attained only by a rational balancing of life's values in the day's work. With a maximum of six hours spent with classes, two or three more at most should suffice

for daily preparation and routine duties. Seven to nine hours of sleep, varying with the individual's needs, should never be interrupted by wearying work and seldom by restful recreation. There remains a good seven hours each school day, much of Saturday, and all of Sunday for meals and other activities which are not strictly school work. The use of this "spare time" determines each person's position in his profession and in the world. Some waste it in loitering, dawdling about, and talking idle nothings. Others waste these precious hours in misguided conscientiousness, worrying over school difficulties, drudging over useless marking of papers, and puttering over trivialities which with a little genuine foresight and vigorous handling would resolve themselves into nothings.

Apportioning the day. Each individual must learn for himself how much of this spare time may wisely be spent in intellectual activity. As long as sleep and exercise are not stinted, it is probable that a vigorous person can work almost continuously while his ambition and interest lasts. But for most of us continuous study in a single field soon becomes burdensome and goes on at a low standard of efficiency. A little time should be devoted regularly to *vigorous* exercise of the sort which is most enjoyed — outdoor sports or some hobby that demands much physical exercise. Meals and some other regular occasions should be happy social times with abundance of mirth and good fellowship. One should carefully select his boarding place, his friends, and associates with a view to having these social hours congenial and enjoyable. There should be conversation of the kind that invigorates, cheers, and delights, and music that one really enjoys. Some time should be set aside for regular reading of the daily news and current periodicals and for some systematic reading of good general and professional literature.

Upward climbing. All this keeps one physically, mentally, and spiritually fit for his daily work, but progress in one's profession is accomplished by the systematic, determined study, writing, or other hard work done little by little, day by day, in the face of fatigue and discouragement, and the unceasing temptation to procrastinate. In this matter of growth a fixed ambition and a definite plan are essential. With sufficient determination and by doing a little every day, a truly astonishing amount can be achieved in the course of a few years in the way of extending one's education and fitting one for better positions. There is no limit set except one's own will power. It is in these hours saved for independent work that "self-made men" are made. What is done in one's working hours holds his job. What is done in spare hours gets a better one.

A work schedule. For many, a definite, written-out schedule is necessary to make the right use of spare hours possible until the habit has been formed. It should be an elastic schedule as already recommended for class work. It is not necessary that all days be used just alike, but it is necessary that the relatively trivial matters of to-day shall not take precedence over the vital thing, and that the things we want to do shall not unduly prolong themselves into time set aside for the thing we ought to do. Each day's troubles and interests seem all important at the time, but all days to come will be like them in this respect. Building for the future is possible only by getting a right perspective of the things of the present. A time for each thing and each thing in its time avoids hesitation and procrastination, and these are time consumers. A definite plan makes for concentration on each employment in turn. A vigorous life necessitates that one play while he plays and work while he works. The busiest men are the ones who have most time for achievements outside their daily routine, and this is

because they have formed the habit of living strenuously, of doing vigorously first one thing and then another, but always doing and doing effectively. Genius is responsible for few genuine successes. Energetic "redeeming the time" is the key to greatness. Also the active, strenuous life is the happier life, the richer life, the life "more abundant." It has far more of fun, of recreation, of amusement, of pleasure, and of achievement.

The folly of worry. Worry is everywhere the great destroyer of efficiency. It is useless, avoidable, and wicked in its disastrous results. Instead of fretting over what you cannot do, decide on what you can do and do it hard. Instead of getting excited about what cannot be helped, accept it and make the best of it. But if there is something that can be helped, then help it. Divert your energies from fretting into achievement. Learn to see all the little troubles of the day *sub specie aeternitatis*, from the long viewpoint of eternity, and then their essential triviality will bring good humor and peace of mind. Faith in the ultimate right of all things is a force whose worth in the school can never be measured. Since "all things work together for good to them that love the Lord," it is only necessary to love Him and work your schedule for all you are worth, to be sure that nothing goes very seriously wrong.

Personality complex but attainable. Personality is often regarded as a quality essential to teaching success. It is spoken of as though it were a single quality, a sort of gift of the gods which one either has or has not, like blue eyes or red hair. But there are as many personalities as there are persons, and there are infinite variations in kind as well as in degree. Personality has been as hard for psychologists to define as was "the will," and for much the same reason. Instead of finding that the will is a separate and distinct thing or function, they have concluded that "the whole

mind active, this is will." So all those manners, accomplishments, habits, interests, abilities, and characteristics which make one the person that he is, — these are his personality. According as the combination is strong or weak, interesting or commonplace, attractive or repulsive, just so we may describe his personality. It is both native and acquired, both inherited and cultivated, both fixed and changeable, both predestined and made from day to day at one's own sweet will. Whatever gift one has been born to, let him make the best of it. But the qualities that count most are achieved through determined effort.

"The best policy." Sincerity is one of the elements of personality for which each individual is responsible. Whatever he may be, let him be himself. Posing is the sure sign of an ineffective personality, but is an especial temptation of the teacher. A too professional air, an attitude of superior wisdom, a pretense of knowing what one does not or being what one is not, an assumption of monarchical superiority, a prudishness in classroom which one does not take seriously outside, or the making of threats which one would not execute — these are forms of insincerity to which teachers of children are particularly prone. All are as futile as they are false. Children see through pretenses with a marvelous shrewdness, and a far-sighted teacher would better confess any ignorance or tolerate much disorder than to have his pupils once begin to discount his sincerity or question the worth of his threats. It may have been sacrilegious wit or mere confusion which first gave rise to the misquotation, "A lie is an abomination unto the Lord and a very present help in time of trouble," but the statement couples quite pointedly the effect and the cause of a lie. It is when the teacher is in trouble through lack of knowledge or lack of control or lack of confidence in his knowledge or in his control that a little lie — white or light gray — seems a very

present help. But he may be sure that it is an abomination and will bring its penalty. There are two means of avoiding such temptation: foresight and rigorous rules of honesty. Foresight plans to meet the difficulty before it comes and gives sureness and strength. A positive love of directness weaves no tangled webs of deceit. It is not one's business to know everything, and a frank "I don't know" is often good teaching, while "Look that up for to-morrow" is a far better method than posing as an encyclopedia.

Tact and its uses. Tact has been defined as the art of attaining your own ends by the other fellow's methods. It is primarily a way of getting maximum results with minimum friction. It is an efficient lubricant for every "point of contact in teaching." Child, parent, teacher, and school official have but one end in view. All have a single purpose. Tact uses for each his own efficient immediate motive in order to attain for all the sufficient ultimate end. Tact is not hostile to sincerity. Honesty has to do with one's own motives, tact with the motives of others. To persons enamored of their own blunt directness there seems a moral straightness in assigning a boy a lesson and making him learn it by an immediate appeal to force, and there seems a sort of crookedness in first manipulating the play motive to make him want to do it. But such bluntness is a more or less egotistical expression of one's own impulses and often becomes a pose, while attaining educative values through nature's forces is the really straight road to teaching success. Tact respects the impulses and interests of parents. It recognizes their parental affection and pride, their ignorance and their anxiety, as equally worthy of consideration and equally to be reckoned as one's own likes and dislikes. Tact is a habit attained by determinedly looking at every problem in the light of the interests and attitudes of others.

It is considerateness and Christian sympathy which are never inborn but must always be cultivated by each individual for himself through much self-conquest.

Politeness — a teaching power. Courtesy and politeness are elements of personality not unlike tact in that they are habits acquired through considerateness for others. If genuine, they soon permeate one's whole character and glorify his personality. The American word "citified," the Latin "urbane," and the Greek "polite" have the same original meaning and indicate respectively three degrees of the "striking in" of a certain polish that comes from contact with others. The shallow "citified" quality is offensive because of its obvious superficiality; urbanity implies no moral worth though a very agreeable quality; while true politeness implies both nobility of character and social charm. There is a fine teaching quality in one's readiness and sincerity in saying to his pupils, "Thank you," "I beg pardon," and "If you please"; or his genuineness in conferring and receiving courtesies precisely as if in a drawing room. Both for its agreeableness and for its tendency to duplicate itself in the children, politeness should rank high in the rating of a teacher's personality.

Cheerfulness. Cheerfulness rests primarily on health and wholesome physical regimen, on comfortable sleep, happy recreation, fresh air, good digestion, vigorous circulation, and those other blessings of the simple life. Yet some strong souls rise above the clouds of physical misfortune and live in the sunshine of eternal cheerfulness. Wisely indeed may a school board prefer this glory of personality to many academic attainments. It enormously removes difficulties and increases study power among pupils. Effort is often necessary to enable one to look on the bright side of things when everything seems to go wrong, but the things most worth while cost effort.

Patience. Unlimited patience is another quality which factors largely in teaching success. We are ever rushing to get over the ground of prescribed subject matter and seem to fail to realize that children must *grow* through their studies, not *go* through them. In matters of conduct we have been expecting children to act according to our impulses, standards, and insights. Good teaching means guiding the child impulses as we would train a vine and letting the growth come from within. Patience, too, is a self-cultivated quality based largely on a sympathetic study of real children.

Courage to trust. Faith in childhood is a fruit of affectionate patience and sympathetic knowledge. The inspiring experiences of those who trust children wisely gives us unlimited confidence in the essential goodness of even the worst of them. The sturdy loyalty of the youthful outlaws of Denver to the trust that Judge Ben Lindsey places in them puts to shame our skepticism. Let us never forget that there is in every normal child an abundance of good impulses to meet every test to which we have any right to subject him, certainly to meet every proper demand of school life. The danger is in our trying to fit complex adult situations to simple child impulses. Strong faith in the goodness of children brings with it a poise which commands respect and meets emergencies.

Firmness. Sincerity, tact, faith, sympathy, politeness, patience, kindness, love, are assets in government because they are wonderfully beautiful things in themselves, because they make the possessor of them lovable and attractive, because they avoid friction and the occasions of governmental restrictions, and also because they make positiveness and firmness possible. The firmness of stubbornness or of tyranny means friction, conflict, rebellion, or else mere groveling servility. But firmness based upon the gentler virtues is easily maintained and thoroughly respected. It is possible

to be firm without being stubborn, but many otherwise good teachers have gotten themselves into trouble and out of position by making issues of nonessentials, by contending for trivialities instead of for fundamentals, by laying down ultimata where only request was justifiable, by omitting the *suaviter in modo* from the *fortiter in re*. Firmness in essentials is fundamental to leadership. It is based on a clear conception of what are essentials. As a trait of personality, firmness may be acquired not by the habit of sticking to every position taken but by the habit of taking no positions to which one should not stick.

Initiative. Initiative, everywhere vital to leadership, makes the main difference between the spiritless, plodding schoolkeeper and the inspiring teacher. One who can only imitate methods, follow instructions, drag through a prescribed routine, deserves pity beyond almost any mortal—except his pupils. Every lesson, every problem of management should be a challenge for an original solution. With a mind well stored with guiding principles and practice in thinking out their application one should solve each pedagogical problem on its own merits. Thus is formed a habit of originality and independence which makes teaching the livest, largest, most inspiring work of man. Especially in the modern community relations is there opportunity for leadership and a need to take courage and start movements which could not otherwise hope to be started. Courage for this sort of thing comes readily with a little experience and the discovery of how easy it is to set things in motion. Reading, visiting, and keeping abreast of the times will supply abundant suggestion, and good sense with hard work will devise the way.

Personal appearance. Personal attractiveness is an important consideration among teaching qualities and well worthy to be cultivated. It is neither unprofessional nor unmanly

nor, needless to say, unwomanly to be as attractive as possible. A sweet face is a better teaching asset than a pretty one. The teachers whom children love for their personal charm are rather those whose beauty shows *through* than *on* their faces; not some skin-deep comeliness but a growing unselfishness, happy disposition, sympathetic interest in others, mental alertness, and genuine worth. Like personality itself, personal charm eludes definition. It is a complex so subtle that it cannot be analyzed, but young people should know that it is attainable. It is not a gift of the gods but it grows with good planting and faithful cultivation.

Cleanliness and taste. Neatness in taste and dress and particularly cleanliness are personal attractions that go far to winning respect and admiration. Their opposites are unpardonable in a teacher. A soiled collar, waist, or nails may contribute quite positively to school troubles. Leadership rests in liking, and it is very hard for refined people to like one who is "tacky" or slovenly.

Friendship. Friendliness wins friends as nothing else can do. One who has been selected to teach the children of a community need have no fear that it will be considered presumptuous in him to regard their parents and the people as his friends. Timidity and the fear of being thought forward has caused many a warm-hearted teacher to be regarded as cold and aloof. While the people owe it to a new teacher to extend a hearty and friendly welcome, many do not, and unless the teacher makes the advance there will often be no advance made.

"— But the greatest of these." The mightiest personal power that any teacher can hope to have is love for his pupils. Despite their faults and deficiencies, despite soiled faces and grimy hands, despite their stubbornness and their impudence, each pupil has a heart and a personality of his own and if only the earnest teacher will find the real soul

of the boy or girl behind the frowns and the freckles, he will find someone there who is lovable and able to love. The teacher who can love his pupils to obedience, love them to industry, love them to loving him, has mastered the whole secret of personality and power. It is not hard to do. It is merely knowing them well, respecting the souls of them, and finding the goodness that is in every one of them. Knowledge begets sympathy, sympathy begets love, and love is the mysterious solvent of all sorts of difficulties that arise in school, in the home, or wherever human beings deal with one another.

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